THE Catholic Educator

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November 1961

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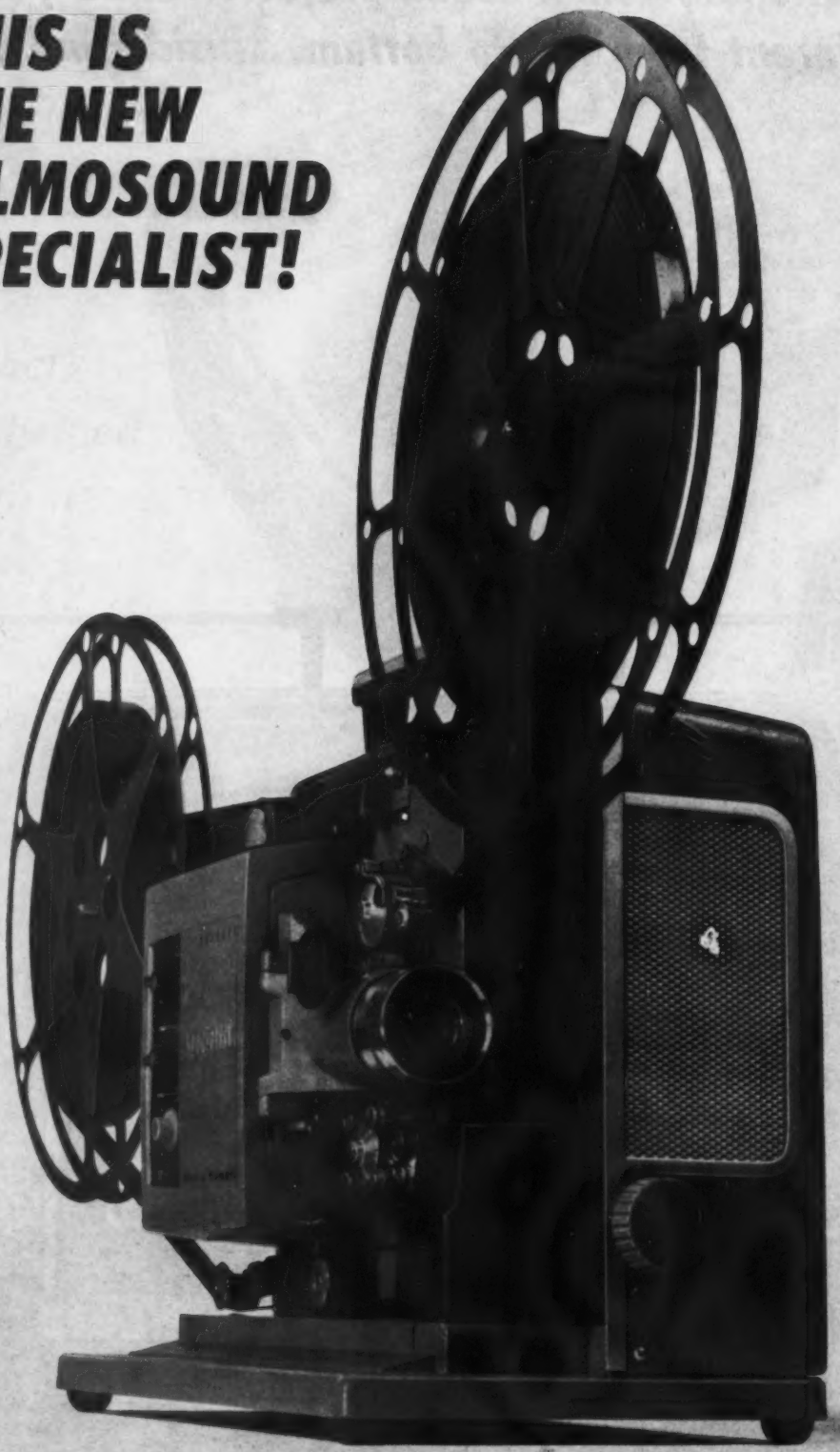

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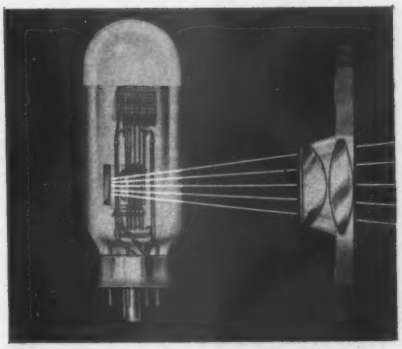

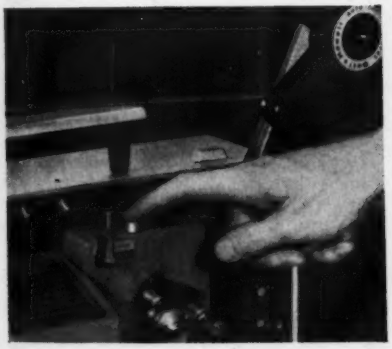

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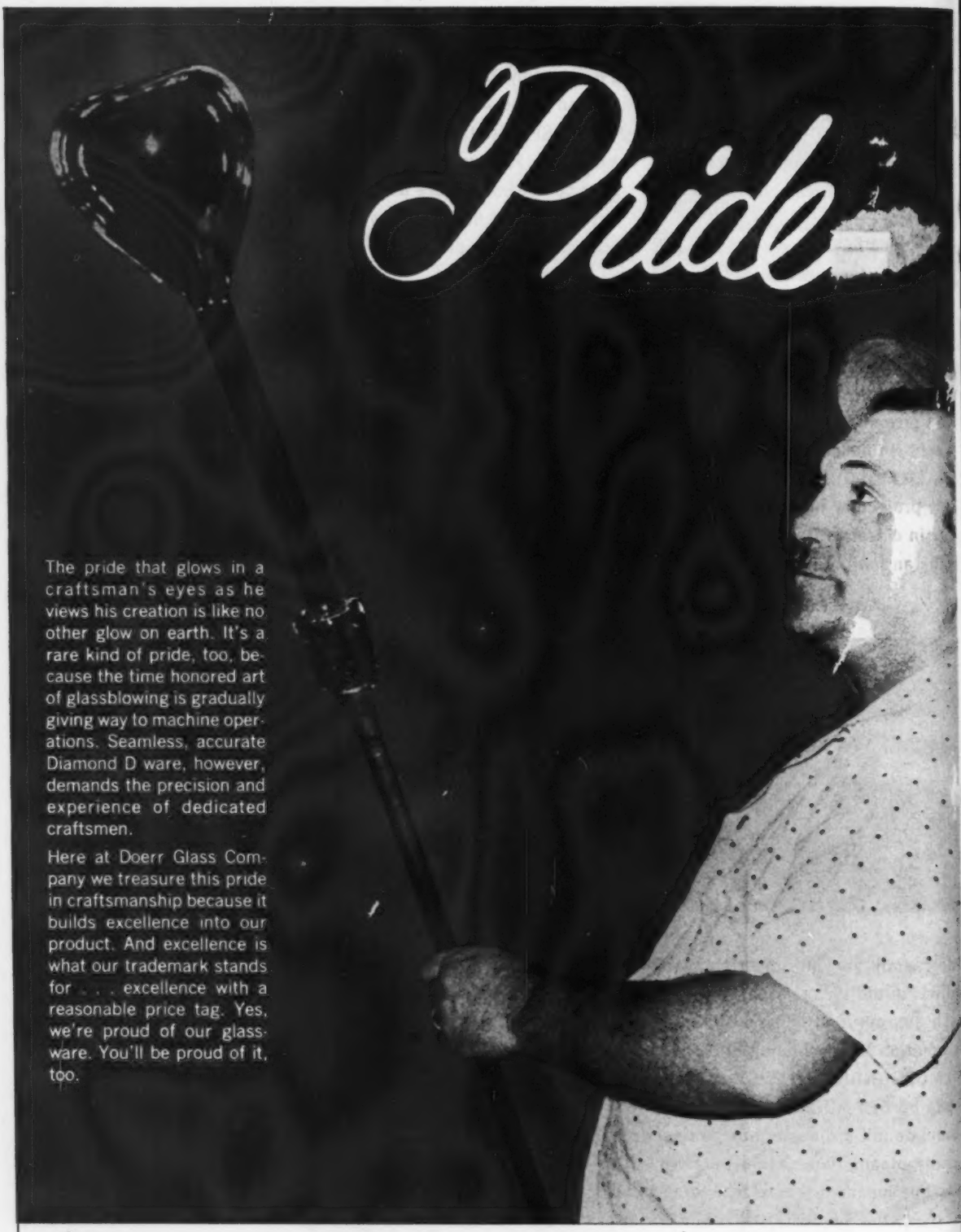

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EDITOR

Rt. Rev. Msgr. Paul E. Campbell, A.M., LL.D., Ed.D.
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ON OUR FRONT COVER

Future physicists, seniors at Notre Dame Academy, Toledo, Ohio, experiment with the boiling point of water.

CLIPS AND COMMENTS

By
John F. Wagner

READING PROGRAMS

As an integral part of the school system in the Archdiocese of St. Louis this year, a new reading clinic will be inaugurated. The clinic will serve the schools not only in correcting reading difficulties but also in its study of reading difficulties so as to prevent the recurrence of reading troubles. Three Sisters of the School Sisters of Notre Dame have been in training at the reading clinics maintained by the city of St. Louis and will staff the new archdiocesan clinic.

In this work, the clinic will serve to test and diagnose the reading difficulties of children as well as train teachers in spotting reading difficulties and to do remedial work with poor readers. In its first year, the clinic will concentrate on the intermediate grades since it is in these grades that the majority of troubles occur. It is estimated that approximately 100 children can be accommodated the first year. Eventually, the clinic will extend its system to the upper grades where special attention will be directed to children just about to enter high school.

Although St. Louis is just starting its reading program, the Archdiocese of Chicago has maintained one for some six years since 1955. In a recent discussion of their program, Sister M. Alcuin, O.S.F., co-ordinator of the program stated its basic objectives:

> Although this is a mass program, it is based on the theory of custom tailored help for each child in each classroom, as far as possible. Our object is to have every child in the system reading at his own level. We give special help but we also provide skillful readers with challenging materials so that they don't lapse into dangerous reading habits.

The Chicago program services 250 of the 430 parochial schools in the archdiocese and was started at a time when about 40% of the students in the school system were below average readers. The program is conducted by Sister Alcuin and 20 "reading co-ordinators" who visit the participating schools regularly throughout the term, measure student abilities, provide reading material, consult with classroom teachers, and observe classroom teaching. The consultants help the teachers by dividing the children into groups, and showing the classroom teachers how to work best with each group. In some cases, the consultants also provide the individual counselling and tutoring for severely retarded readers.

A major goal of the Chicago program—and for all reading programs for that matter—is the prevention of behavior problems and emotional difficulties that may arise through inadequate reading ability. Msgr. Vincent Cooke, archdiocesan supervisor of charities under whose supervision the program is conducted explains it this way:

> One of the happiest kinds of charitable work is that which solves a problem before it occurs. The reading service belongs in that category.
>
> If a book is too hard or too easy for a child, he frequently loses interest in his schoolwork, and becomes undisciplined and rebellious. Others are frustrated by difficult reading and withdraw into themselves. In a variety of subtle ways, reading problems create emotional difficuties that can last a lifetime.

Msgr. Cooke maintains that a child reading at his right level has a better chance to become a good and useful citizen, and a well-integrated person.

LOGIC AND ILLOGIC

Some weeks ago, the President signed into law the extention bills for the NDEA and the Federal Aid to "impacted areas" legislation. In his statement on the occasion of the signing, the President noted in clear and precise language his extreme reluctance toward signing either bill, referring to the administration's Federal Aid to Education bill as the proper answer to these needs. Lamenting the demise of his plans in this area, Mr. Kennedy singled out the retention of the anti-Communist affadavit in the NDEA as undesirable and hoped the Congress would reconsider this next session.

But the bulk of his statement was devoted to the impacted areas bill. Here he maintained that it was illogical for some to argue for Federal Aid in these areas and not extend it to all areas.

> I am not unmindful of the problems this program is designed to meet . . . But I believe that overcrowded and hazardous classrooms are undesirable anywhere, whether filled by the children of Federal employees or *by the children of other Federal taxpayers,* and whether the local resources are strained by the location of a Federal facility or by any other

(*Continued on page 222*)

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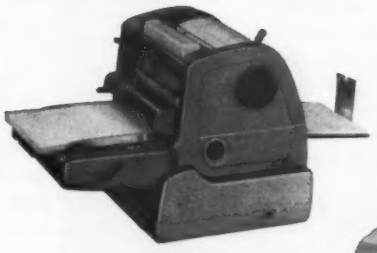

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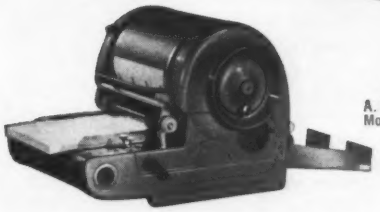

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(*Continued from page 220*)
cause. A quality education is a *necessity for all American children,* not merely those who by good fortune live in a district covered by this program. (Emphasis added)

Logic is a very precise science. And those who employ it have to follow its rules—and the rules are unbending. Thus it is with the current statement on the part of the President, we are presented with an anomoly wherein he castigates the logic of those who argue for Federal aid for some, while his previous program, the one he laments, was based on exactly the same principle, Federal Aid to some, but denied to others. Whereas in his current statement, he says he favors education for all American children, we know from previous statements that a clause has been omitted but certainly not discarded, that clause reading: all American children *attending public schools.* Logic indeed.

A LECTURE AND THE LECTURED

At the American Council on Education meeting recently, 1,000 university presidents and deans listened as the Secretary of Health, Education and Welfare, Abraham Ribicoff, threw away his prepared text and proceeded to lecture them on their lack of support for the recent Federal Aid bill.

> I don't think you really care about education. And I don't think you are going to solve the problems of education by going to meetings.

Expanding on his premise, the Secretary charged that, when the aid bill needed support, "everybody looked out for his own interests, everybody wanted a piece of it." But, he said,

> . . . education was done in because nobody wanted to cooperate on a broad front. Where were you educators? . . . each of you was in his own compartment, looking for support of his own program and interests.

The Secretary calls "eyewash" all proposals to circumvent the Rules Committee and complained that while a lot of people he had talked to pretended to believe in education, they actually wanted only a piece of education. Compromises suggested to the original bills, he thought, were sometimes better than the former proposals, but, he added, "all the extremists opposed them."

This talk was one of the first series of talks that the Secretary has scheduled for various sections of the country to conduct a nation-wide campaign to sell the American people on Federal Aid for "quality education." The fact that he threw away his prepared text and spoke sternly to a group of educators, the majority of whom probably were in sympathy with his Federal Aid proposals, testifies to his integrity and deep feeling on the subject. Nevertheless, from his remarks, candid as they are, it is apparent that the Secretary has still to realize the deep feeling behind, and the content of the basic arguments of opposition to Federal Aid. Discrimination, Federal Aid where none is needed, and federal control, all present valid, strong arguments which have not been resolved to the satisfaction of the majority of the American public. If the Secretary is on the stump for Federal Aid, perhaps the first thing he ought to realize is that those who seek "a piece of education" as he calls it, are in reality seeking the best education for their children. As a result if, in supporting the Administration plan, they see that they may aid other types of education while injuring their own, they have every right to look out for their own self interests prior to reviewing their neighbors'. By all means, let us do something for education, let us assist it on a broad front, but at the same time, let us be fair to all education, let us insure that all are treated the same way and in the same manner and then, if the need is substantiated, college presidents and deans will be joined by teachers, parents, and John Q. Public to insure "quality education" for all American children.

DESIGNS ON/FOR ETV

Bishop James A. McNulty of Paterson, New Jersey, long an advocate for responsible broadcasting and an early champion for educational television has viewed the current difficulties concerning Catholic school enrollment figures and has urged that we employ modern techniques to teach more pupils with the same number of resources. The key to this, the Bishop feels, is educational television and has said that it would be "painfully ironic" if, when the public schools are faced with the influx of those Catholic students the system could not handle, they would turn to the one tool the Catholic system should have used to handle the same numbers, that being ETV. In line with this, the Bishop has urged that as a first step in solving the problem of how to make the best use of ETV in the Catholic school system, each diocese train at least one individual to serve as its ETV consultant.

An effort has been started on the national level for coordination of ETV with Catholic curriculum, with Father John Culkin, S.J., assigned to the NCEA staff specifically for that purpose. Father Culkin's theory is that ETV "will not wait for the uninformed" and that since ETV undoubtedly will be the prime teaching tool of the future, "educators in each city must either be part of the planning and financing of these stations at their inception, or face the alternative of having no control and part in a station which is likely to have an indefinite monopoly of the educational programming in their city."

To provide development possibilities for those Catholic educators interested in ETV, Father Culkin, in association with Sister Mary Rosalie, radio-TV director for the Pittsburgh diocesan schools, inaugurated a summer school at Fordham University with three credit courses in ETV designed especially for Catholic school personnel.

But preparing for ETV with study and local participation is not the entire program for ETV. In planning for ETV, one of the most important areas of television impact—and one of the most disastrous to neglect, according to Father Culkin—is school design.

> Every school built today is meant to serve the needs of learning for at least the next 40 years. Unless the school planners realize that new opportunities will modify the school, there is every danger that great amounts of money, steel and bricks will be used to construct clean, sanitary, but obsolete buildings. We must make certain that our school buildings are not so rigidly designed as to prevent future growth and adaptation.

In practical application, this planning means the inclusion of conduit systems for closed circuit TV and provisions for flexible arrangements of classrooms and facilities for various types in instructional means.

Thus a new tool is gradually being added to books, A-V aids, chalkboards and other items helping the teacher, to become, perhaps, the means whereby our Catholic school children can be educated in larger numbers without straining the resources of the system beyond reason.

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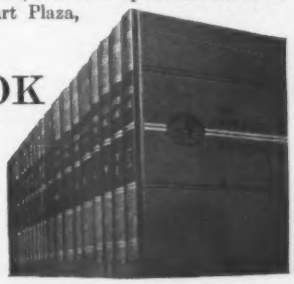

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MAKING THE...GRADE

THE OTHER DAY I was researching a feature on that industrious animal, the beaver, for JUNIOR CATHOLIC MESSENGER. I came upon a story which seems to have a message for editors like me, and perhaps for teachers like you. It seems that a bevy of beavers (if that's the right collective) was trying to build a dam. Again and again they gnawed down some saplings, pushed them into place, and began applying the dirt fill. Again and again the current washed everything away. Finally they went off to see a more experienced beaver who agreed to take charge. Under his direction the dam was soon completed... We're all a little like the beavers, aren't we? No matter how long we've been doing what we've been doing, there's always something new to learn, someone to learn from, and a better way of doing things... This is why I periodically ask myself, "Is there room for improvement?" As I'm sure you've noticed if you've been a JUNIOR subscriber these past few years, we always answer 'yes.' Then we go ahead and make the improvements that seem called for. Last year, for example, we added four new supplements. This year we have five such supplements. And have you noticed the other big change this year? Many of you have, I know, because you've written to tell me you liked it. Yes, JUNIOR's format and typography have been redesigned, making for a much more attractive, modern appearance, and easier reading. And do you like the art we've been using? One of our artists, Frank Huffman, now lives in one of the most picturesque parts of England. Maybe this accounts for the freshness and airiness of the drawings he sends us.

Well, I certainly hope you will enjoy using JUNIOR this year and that your fourth-, fifth-, and sixth-grade readers will profit greatly from it. For those of you not yet using JUNIOR, may we send you sample copies? Write to: Geo. A. Pflaum, Publisher, Inc., Dept. 10, 38 West Fifth Street, Dayton 2, Ohio.

EDITOR
JUNIOR CATHOLIC MESSENGER

Reader Reaction

Cautions Hailed

EDITOR:

In addition to the sisters who teach our parish youngsters, both myself and my assistants find THE CATHOLIC EDUCATOR most helpful. The priests of the parish make a personal effort to keep in touch with our young men and women who leave the city for college, particularly those who attend non-Catholic institutions. It is in line to comment here, in connection with some letters you have been carrying in your "Readers' Reactions" section, that these efforts have been fruitful. Most of these young college people continue to take part in parish activities during the school year, as much as their schedule allows. Their interest and energy after graduation is most edifying. 'Tis not everywhere such, I full well realize.

Within the past two years or so, however, myself and my assistants have noted a dismaying "sophistication" among a few of them regarding biblical matters. Apparently I am not too old to be shocked since some of the things they tell us they have been told regarding events in the New Testament is news to me. At the very least, this puts me on a spot. Certainly I don't want to be in a position of questioning their professors qualifications —I'm now talking about our Catholic colleges—and at the same time I don't want these young people to wonder what is fact and what is not fact in the Gospels.

If you have no plans to do so, may I ask that you allow me to place in your pages for all to read the *monitum* issued this past June by the Holy Office.

"Through praiseworthy enthusiasm for Biblical studies, assertions and opinions are being spread in many quarters, bringing into doubt the genuine historical and objective truth of the Sacred Scriptures, not only of the Old Testament (as Pope Pius XII had already deplored in his encyclical letter *Humani Generis*, cf. *Acta Apostolicae Sedis* XLII,576), but even of the New, even to the sayings and deeds of Christ Jesus.

Since assertions and opinions of this kind are causing anxiety among both pastors and faithful, the eminent cardinals who are charged with preservation of the doctrine of faith and morals recommended that all of those who deal with the Sacred Scriptures either in writing or orally, should be warned always to treat such subject-matter with due discretion and reverence and always to have before their eyes the doctrine of the Fathers of the Church and the mind and teaching authority of the Church, lest the consciences of the faithful be disturbed or the truths of the Faith be injured.

N.B. This admonition is published with the approval of the eminent cardinals of the Pontifical Biblical Commission.

Given at Rome by the Sacred Congregation of the Holy Office, June 20, 1961.

MSGR. SEBASTIANO MASALA, *Notary*

So much for this significant *monitum*.

Not long afterward our Apostolic Delegate, Archbishop Egidio Vagnozzi, spoke at a conference of American religious superiors and representatives of the Holy See. The conference was held at Notre Dame University in the latter part of August. Undaunted, of course, by the "rebuttal" which nine Catholic "intellectuals" made to his magnificent address earlier at Marquette University, His Excellency underscored the monitum of the Holy Office in the following words:

". . . I wish to call your attention in a particular way to the recent monitum of the Holy Office regarding biblical sciences. This monitum did not originate in the personal worries or limited views of a small group of Vatican officials. Nor was it issued without serious and weighty reasons.

It came from that sacred congregation which is supreme among the authoritative organs of the Apostolic See and of which the Holy Father himself is the head and Prefect. A monitum is only a warning, but it is designed to prevent the adoption of stronger and more direct measures. When Our Mother speaks, it is the duty of her children to listen and to conform their activities to her commands. See to it, therefore, that all those under your authority respond to this monitum with a filial acceptance which is sincere and that they observe its prescriptions with exactness.

The monitum has called for prudence and respect not only in writing but also in speaking of biblical matters; in this latter activity the vigilance of provincials is needed more both because lectures are often more persuasive than writings due to the force of the speaker's personality and also because this activity is frequently not subject to any vigilance from outside the institute. Assure yourselves that all such activity subject to your jurisdiction is precisely what the monitum requires."

OLD PASTOR
Milwaukee, Wisconsin

Sets but Not Sub-sets

EDITOR:

Since it has been proven that "sets" are so vital in the teaching of higher

(*Continued on page 313*)

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minutes spent with any of these three UNITRON Student Microscopes will you more than we could say in ten thousand words. That's why we'd like invite you to try one — or all three — for ten days . . . FREE. The only thing have to invest is the next 5 minutes . . . to find out what's in store for you top-notch performance and added advantages.

T'S THE FERENCE? At first glance, the printed specifications on all student microscopes look the same. might well ask "What's the difference — ny?" Here are the facts.

Even many of the largest manufacturers d that optical and mechanical short cuts quite acceptable in microscopes designed the school or college laboratory. Therethey design their microscopes with er-resolution objectives, without conners, and often simplify mechanical conuction. In contrast, UNITRON Student dels MUS, MSA, and MLEB are deed to give *regular, professional performance*, h no compromise in image quality.

E LAWS OF OPTICS HOLD STUDENT MODELS TOO For a beginning student, any enlarged age seen through the microscope will pear exciting. But isn't it just as important see a *correct* image? A *true* picture? Magnification without resolution is empty . . the image appears blurred and details e fringed with diffraction lines in much same way as a faulty TV picture. That's y UNITRON *doesn't offer* a 'student ies' of objectives which, though named to ply "achromatic", still let color and aberations in through the back door. *All* NITRON Student Microscopes are uipped with the *same professional-type jectives* supplied on our more expensive edical models. Because our high-dry OX objectives and condensers each have a merical aperture of 0.65, the student can joy the same quality image at 400X or OOX that the medical student sees through more expensive instrument.

HY A CONDENSER? In microscopes using 'student series' objectives, the omission of a condenser may not be too serious, *because there is really no high numerical aperture, or resolving power, to be realized.* But all UNITRON Student Microscopes have a *0.65 N.A. condenser* to utilize the *high resolution* of our *professional quality objectives.* We also provide an adjustable iris diaphragm (not merely a disc diaphragm) to control light reaching the condenser. All these extras work hand in hand with UNITRON's anti-reflection coated optics to produce an image of optimum contrast and clarity.

WHAT STAND DO YOU TAKE? Teachers and students want easy operation, durability and adaptability. And that's just what UNITRON Student Microscope Stands are designed to give. Positive and smooth coarse focusing is by a diagonal-cut rack and pinion. A simple counter-twist of the knobs gives easy tension adjustment to meet any preference. A separate and independent fine focus with full range of travel has a precision micrometer screw to assure sharp images.

Now — about the microscope stage. For precise movement of the specimen at 400X and higher, UNITRON offers a quick, easy way of attaching a reasonably priced *mechanical* stage. (Some manufacturers offer this feature — but only on their higher priced models.) All UNITRON Student Microscopes have stages pre-drilled and tapped to permit future addition of a precise, but inexpensive ($14.75) mechanical stage. The large stage of Models MUS and MSA also acts as a bumper, projecting beyond the objectives and nosepiece to prevent accidental damage.

SOMETHING NEW HAS BEEN ADDED. All UNITRON Student Microscopes now have built-in focusing stops that prevent accidental contact between the objective and specimen slide. This reduces repair costs for objectives and prevents slide breakage. Without the stop, it is easy for beginning students *to pass through* the critical point of focus, not even realize it, and ram the objective into the slide. The new stop also saves time and temper by *automatically* placing the image in approximate focus. Student guesswork is eliminated.

NEW 10X WIDE FIELD EYEPIECE Student microscopes are often chosen with at least two eyepieces, usually the Huygens type . . . a 5X for its large area of view, and a 10X for the magnification needed for critical observations. Now, our new coated 10X Wide Field eyepiece *combines* both these features in *one* eyepiece — *a large field and the desirable 10X magnification.* Teachers will like it: one eyepiece is more convenient than two. There's no chance for the extra one to become lost or damaged. And, it's slightly easier to use the Wide Field eyepiece because of its longer eye relief — you don't have to get your eye so close to the lens. Model MUS is now regularly supplied with this new eyepiece, but it's optional on Models MSA and MLEB, too.

ATTACHABLE SUBSTAGE ILLUMINATOR. A snap-fit illuminator that attaches by means of the regular mirror mount, this new accessory eliminates any need for mirror adjustments or an outside light source. Even when the microscope is moved or inclined, the illuminator stays in alignment. It combines correct light intensity with convenience. Operates on regular 110–115V. current. The housing is rotatable 180° to give a choice of two types of illumination: bull's eye condenser for concentrated light or plane condenser for diffuse lighting. Built-in blue filters give daylight quality. Cost? — only $10 as an accessory (less an allowance for the regular mirror if you don't need it.)

MEETS C.C.S.S.O. REQUIREMENTS . . . AND MORE. UNITRON Student Microscopes more than meet the general requirements outlined in the *Council of Chief State School Officers* Purchase Guide. Our microscopes are available with either three or two objectives. Models with two objectives are supplied with a triple revolving nosepiece (with removable plug in the extra aperture) so that you can add another objective when you want it, without the extra expense of changing nosepieces.

CAN YOU AFFORD NOT TO BUY? Check some of the prices listed in other suppliers' ads and literature . . . then look at ours. UNITRON *saves you real money.* And, if you're in the market for several instruments, new quantity discounts make our prices even lower . . . 10% for 5 to 10 and *even higher discounts on larger quantities!*

WHY NOT TRY ONE? If you are planning to buy microscopes, now or for your next budget, please accept our invitation to try one, or all three, UNITRON Student Models in your own laboratory, at our expense. Let UNITRON prove itself *to you* before you decide.

*Free delivery to your school. Plastic dustcover, fitted wood case with handle and lock, are all included in prices shown. For information on other microscopes and accessories, send for free catalog — see coupon.

$75 each

UNITRON STUDENT MICROSCOPE . . . . . MODEL MUS

EYEPIECE — Coated 10x Wide Field

OBJECTIVES — Achromatic coated 5x(.10NA), 10x(.25NA), 40x(.65NA)

SUBSTAGE — .65NA condenser, iris and mirror

PRICE* — $75 each (or $67.50 each in lots of 5–10)

*With 10x Huygens eyepieces — choice of 5x, 10x, 15x — price is $71 each, (or $63.90 each in lots of 5–10). Substage illuminator available in place of mirror as accessory at slight change in price.

$107 each

UNITRON AUTO-ILLUMINATION . . . . . MODEL MSA

EYEPIECES — Coated Huygens 5x, 10x, 15x

OBJECTIVES — Achromatic coated 4x(.10NA), 10x(.25NA), 40x(.65NA)

SUBSTAGE — .65NA condenser, iris, filter holder, built-in transformer and high intensity illuminator.

PRICE* — $107 each (or $96.30 each in lots of 5–10).

*With 10x Wide Field Eyepiece in place of three Huygens, MSA priced at $103.50 each, (or $93.15 each in lots of 5–10).

$118 each

UNITRON STUDENT—LABORATORY . . . MODEL MLEB

(illustrated with optional illuminator)

EYEPIECES — Coated Huygens 5x, 10x, 15x

OBJECTIVES — Achromatic coated 4x(.10NA), 10x(.25NA), 40x(.65NA)

SUBSTAGE — .65NA condenser, iris, filter holder, and mirror

PRICE* — $118 ea. . . . $106.20 ea. in lots of 5–10

*With 10x Wide Field Eyepiece in place of three Huygens, MLEB priced at $114.50 each, (or $103.05 each in lots of 5–10). Substage illuminator available in place of mirror as an accessory at slight change in price.

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UMI

Audio-Visual News

The Magic of Motion with New Slide Projector

A new kind of slide projector that gives still pictures the flowing continuity of movies has been introduced by Bell & Howell. It is called the Tandem-Matic Professional.

At the touch of a button on a pistol-grip remote control, one slide slowly fades from the screen as another takes its place, giving the slide presentation the "lap dissolve" effect of a professional motion picture production.

Very dramatic effects can be achieved by changing only certain elements in consecutive pictures—lines spurting across a graph, or a piece of machinery taking shape part by part, or flowers opening and closing. A teacher making his own slide sets can easily apply the principle, limited only by his imagination.

The Tandem-Matic is actually two separate 7-element optical systems housed side by side in a single unit. The key components are two 5-inch, f/3.5 lenses focused on the same spot on the screen. Accessory 7½-inch lenses may be had for large rooms and auditoriums.

Synchronized blades gradually close the diamond-shaped iris of one lens while opening that of the other, giving the "lap-dissolve" effect. The entire change-over from one slide to another takes 1½ seconds. A touch of the remote unit will arrest the "fade-over" at any point for special double exposure effect.

The remote unit, with a 12-foot cord, also contains focus-control the reverse button, and a light pointer.

The projector's special Tandem Tray holds 54 slides, accepting Bantam, 35mm or Super Slides in cardboard, glass, or metal mounts as well as plastic binders. Slides cannot spill out once loaded into the trays.

Construction is of die-cast magnesium, weight is 22 pounds, measure is 14½ inches length and width and 8 inches in height. Lamp is a single 750-watt.

More information may be had from Bell & Howell, 7100 McCormick Road, Chicago 45. **A-V 21**

5 records and 11 Multiplication Quiz Cards

Musical Multiplication Records

Now let your class have fun drilling on the tables from Twos through Twelves

Now for the first time the Multiplication Tables have been set to music and put on records! Thousands of schools have ordered these new Bremner Multiplication Records. Teachers and pupils find them a welcome change from the monotony of routine drill.

Each table—from the Twos through the Twelves—has its own distinctive tune and catchy jingle. Fife, drum and clarinet lead the drill in a gay, spirited tempo. Because children habitually memorize their records, they quickly master the multiplication tables with these records.

A school principal in Lewiston, Pa. writes: *"Our children are taking new interest in learning their multiplication. Your records have a unique approach and a good one. Excellent investment for schools and parents."*

The set consists of 5 double-faced records (one table on each side) and 11 quiz cards. There is a musical quiz game for each table. Everyone in your class will have fun trying to "beat the man on the record" in the quiz.

Bremner Musical Multiplication Records are sold only by mail—not available in stores. If not delighted after 15 days trial, return them for full refund. Complete set only $9.95 postpaid. Please specify 33⅓, 45, or 78 RPM speed.

BREMNER MULTIPLICATION RECORDS
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Please send me a set of 5 Multiplication Records and 11 Quiz Cards. I understand that if I am not fully satisfied, I can return the complete set within 15 days for full refund.

☐ $9.95 enc. ☐ School purchase order enc.
☐ 33⅓ RPM ☐ 45 RPM ☐ 78 RPM

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High Slant-Top Table for ETV in Classrooms

Meeting the requirements set for Midwest Airborne Television Instruction in their book, "Specifications for Equipping Schools for ETV," is this special ETV Table introduced by H. Wilson Corp.

The table is 54" high which puts the center of the TV receiver 5 feet above the floor for optimum viewing throughout a classroom.

The top shelf slants 8 degrees to minimize reflective glare by tilting the TV set downward. Students thus have a direct line of sight.

Measurements are 24" by 28". This allows the table to accommodate any size of receiver, yet permits it to be rolled through regular classroom doorways.

(*Continued on page 232*)

V-M TAPE RECORDERS make advanced teaching techniques easier!

V-M "ADD+A+TRACK"®

Any Instructor's Most Valuable Teaching Tool!

Versatile *V-M "Add+A+Track"*® offers unlimited opportunities for powerfully effective teaching methods! A teacher records lessons; then, or at any later time, the student records on another track *while listening* to the teacher's recording. On play-back, both recordings are heard simultaneously! Student track may be *re-recorded* any number of times *without affecting the teacher's or master track.*

V-M 'tape-o-matic'® Stereophonic Tape Recorder with "ADD+A+TRACK"®—Model 722—$259.95* List. Records Stereophonically; plays-back 2 or 4-Track stereo tapes. Twin Microphones. Dual Tuning Eye and Volume Controls. Also Available V-M Stereo-Play-back Model 720 with **"ADD+A+TRACK"®—$225.00*** List.

V-M 'tape-o-matic'® Tape Recorder—Model 730—$169.95* List. Monaural Record and Play-back of *all* three popular tape speeds—7½, 3¾, 1⅞ ips. Compact, Lightweight (Only 21 lbs.) New 3-position Microphone.

ALL V-M TAPE RECORDERS INCORPORATE THESE QUALITY FEATURES:

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- **Shut-Off Switch** automatically shuts-off power supply . . . teacher concentrates on students, *not* recorder!
- **Monitor switch** for use of recorder as an Ear-trainer with earphones, as a P.A. system, or to utilize amplifier in the recorder with a second sound source, such as a phonograph!

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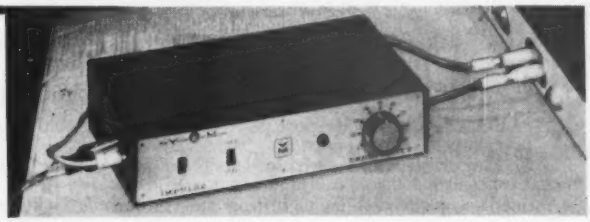

Unite Sight and Sound for More Efficient Instruction!

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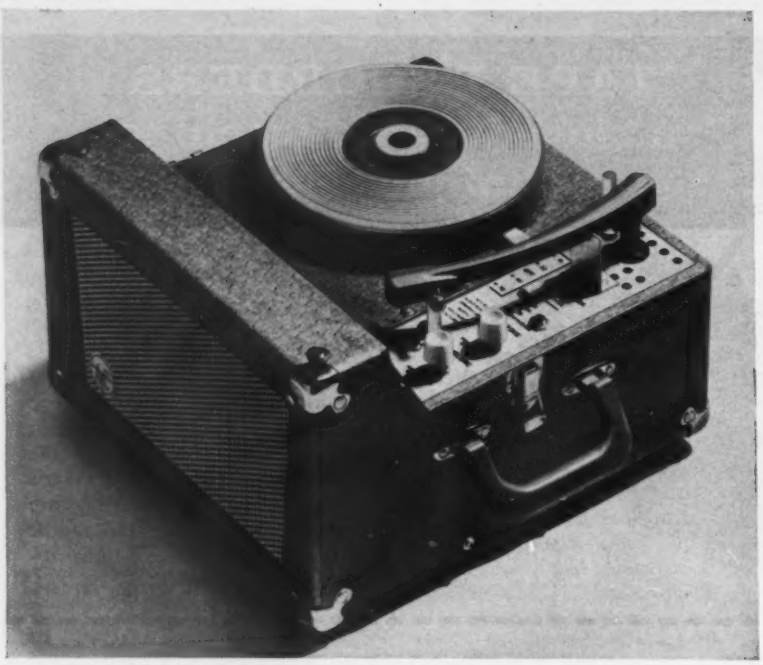

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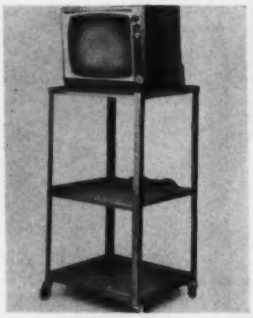
AUDIOTRONICS

11057 WEDDINGTON STREET, NORTH HOLLYWOOD, CALIFORNIA

Audio-Visual News

(*Continued from page 230*)

Constructed of all-steel, welded with smooth safety rolled edges, they have sandalwood finish double baked-on to resist marring. Two of the 4" ball bearing casters have brakes. Top shelf is



covered by a 1.4" foam rubber pad. An accessory web strap holds TV receiver to the table.

For complete information, write the H. Wilson Corp., 546 W. 119 St., Chicago 28, Ill. **A-V 22**

SVE Thanksgiving Filmstrip

The Society for Visual Education, Inc., offers youngsters a fanciful excursion into our native American holiday with a new filmstrip, *Thanksgiving for King*.

The star of this fantasy is a turkey which is hatched by a hen along with her own eggs. In the course of the film he grows from a tiny poult to a full-grown Tom. His majestic air and concern for others soon earn him the title of "king of the barnyard," or "king." In the best tradition of children's literature, a brave deed saves King from the fate of being the Thanksgiving dinner. Instead he is served one as a hero's reward.

A lesson in science is provided as children watch the seasons change as the action progresses and see King's growth contrasted with that of ducklings and chicks whose narration coincides with his.

Designed for children ages five to eight, the film is set against a background of preparation on a farm for the Thanksgiving holiday.

For more information about this filmstrip and "Paddy's Christmas," and a new guidance series, write Society for Visual Education, Inc., 1345 W. Diversey Parkway, Chicago 14. **A-V 23**

(*Continued on page 234*)

Unlock these words. Say them:
fireman
milkman
airport
cowboy
footprint
postman
What two words did you hear in each word?
Frame shown is from a set of six filmstrips, "Phonics—A Key to Better Reading" by Society For Visual Education*, Inc.

How to focus on phonics ...yet make learning a TREAT!

PHONICS can be a boring struggle for students and teacher alike. To dispel this drudgery, a teacher combines today's compelling filmstrips with class participation. After introducing a filmstrip to her reading group, she permits the children to individually review the strip for the class. Each pupil takes pride in being part of the project—finds learning phonics can be fun—and develops presence and confidence by speaking in front of the class.—Just one example of how filmstrips or slides, plus a measure of creativity, can make dull subjects vivid, living and interesting. For a wealth of helpful information send for the 48-page Graflex Audio-visual Digest, containing leading AV articles from the past three years. 25¢ per copy. Free to AV directors.

*TRADE MARK

for versatility, economy, convenience choose

SCHOOL MASTER*

...the FOUR-IN-ONE Projector

■ **It's a Filmstrip Projector.** Simplified threading, framing. Precise advance without backlash. Operates from right or left. Twin aperture plates hold film at correct optical angle. Exclusive accessory rewind take-up automatically rewinds filmstrip into storage can. ■ **It's a 2 x 2 Slide Projector.** Low-cost accessory slide changer attaches in seconds, without tools. No need to remove changer while filmstrip is projected—or to remove filmstrip gate while projecting slides. Accessory magazine slide changer shows slides in sequence—without handling. ■ **It's a Microscope Slide Projector.** Accessory "Micro-Beam" unit attaches without tools. Projects standard dry-mount lab slides in crisp detail up to 300X magnification. Greater illumination than conventional microprojectors. No need to darken room completely. Check-stop aperture disc permits concentration on specific sections of specimen. ■ **It's a Tachistoscope.** Accessory "Speed-I-O-Scope" attaches without tools. Permits flash exposure of various visual stimuli. Accurate control of exposure duration, intensity and duration of stimulus. Ideal for memory training, improving reading speed, arithmetic, language, etc.

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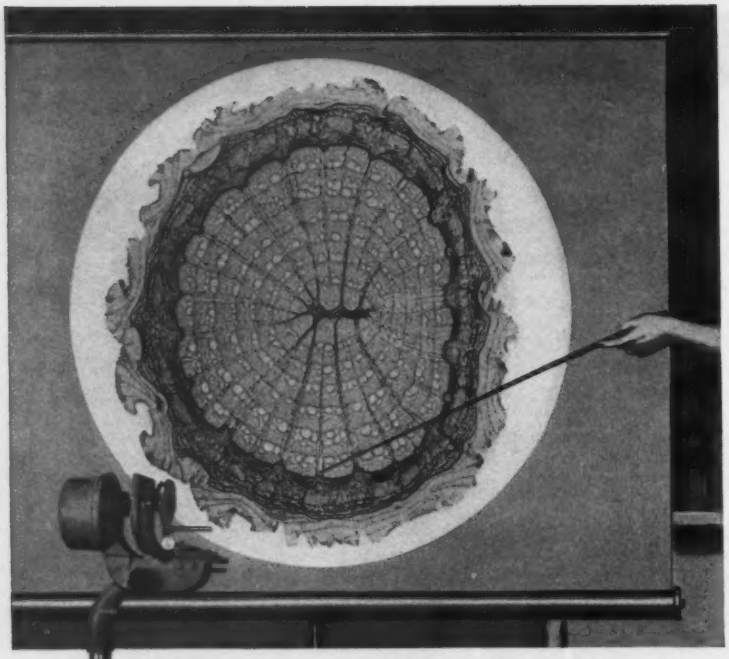

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You save precious teaching time, too. This Tri-Simplex Microprojector lets you point out important details of microscope study to all students at the same time. They see brighter, clearer images than any other school projector can provide. They know exactly what to look for with their own microscopes. They understand better, learn faster.

BAUSCH & LOMB TRI-SIMPLEX MICROPROJECTOR

Projects mounted specimens or living organisms on screen or tracing pad.

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Standard size and operation with exclusive student-proof features.

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Basic tool of chemical analysis; shows spectra of elements.

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Audio-Visual News

(*Continued from page 232*)

EBF Develops New Film Program for Teaching Biology

Educational motion pictures are today moving closer to a complete science curriculum on film with the introduction of a filmed program representing a new approach to biology instruction by Encyclopaedia Britannica Films.

The new Biology program presents fundamental information in a form that facilitates its integration with existing teaching patterns, it was stated by Maurice B. Mitchell, EBF president. "This basic concept—which treats each film as part of an ultimate package covering the entire curriculum area—may well turn out to be the most significant advance we have made in improving the effectiveness of classroom films since this company was started," he emphasized.

The Biology Program, consisting of 66 films and 50 filmstrips, has units ranging in length from 10 to 24 minutes which can be shown whenever the teacher feels a particular film is appropriate to her classroom schedule.

The accompanying picture shows two "shots" in the stages of development of a chicken in an egg from *The Chick Embryo*, one of the completed units in the new EBF Biology Program. The upper view was taken 10 days after incubation, the lower view clearly shows the system of large blood vessels coming up from the embryo to carry the respiratory exchange gases from the shell.

More information may be had from Encyclopaedia Britannica Films, Wilmette, Ill. **A-V 24**

Nuclear Radiation New Film Series by Cenco

A new series of seven educational films to help introduce high school students to studies of radiation have been produced by Cenco Educational Films, Chicago. (*Continued on page 248*)

Mr. Edward Moyer
Superintendent of Schools
West Hempstead, N. Y.

"Mr. Edward Moyer says, after using The Reading Laboratory Inc.'s DR Skill File."

"I think we would want to make Developmental Reading a regular course offering, something that all our students would take at some point in their secondary school years . . . in West Hempstead, parents have come out strongly in favor of what we are doing."

Mrs. Vachio comments

"The exercises were a wonderful supplement for textbook work . . . they dealt with subjects that the students were either familiar with or would shortly get to know."

Typical student comment

"I gained a lot from this course despite the fact that I didn't like to read before I took it."

Mrs. Rose Vachio, Reading Instructor
West Hempstead, N. Y. School System

$62.50

The DR Skill File is a complete Developmental Reading Program, the result of 12 years of study and preparation by recognized reading experts. The materials cover grades 7-13, and provide all the basics necessary to enable you to conduct a successful Developmental Reading Program in your school.

The Administrator's Guide and the individual Student Manuals written in clear, concise language, assure full participation of both teacher and student — with excellent results.

The DR Skill File is easily and quickly integrated into any curriculum. Let us show you how.

For full information write:

The Reading Laboratory, Inc.
500 Fifth Avenue New York 36, N.Y.

UMI

They're *Learning* A Foreign Language . . .

with the new Viewlex

SIGHT AND SOUND

LANGUAGE STATION

that *every* school can afford!

From Viewlex—leader in compact audio-visual equipment—comes the new Sight and Sound Language Station . . . the truly low cost foreign language teaching aid. Designed for individual or small group instruction, Viewlex Language Stations utilize colorful film strips and up to 12" records to enable one, two, three or four students to "see" the meaning of words, phrases and sentences as they are spoken in their authentic manner.

Built into a portable luggage-type carry case, the Viewlex Language Station can be moved easily from room to room. Individual earphones prevent sound from carrying—permits several Stations to operate at one time. Large libraries of record and filmstrip combinations are available in almost all languages.

With the lowest cost-per-student of any *audio* language system, the EXTRA benefit of *visual* study makes the Viewlex Sight and Sound Language Station a truly worthwhile adjunct to your foreign language curriculum.

Model #TT-1

Complete with 4 sets of earphones $149.95

Write today for complete literature and/or demonstration. No obligation, of course.

For entire classroom or large group instruction, ◀ Viewlex Models WR-A and WHD-A Language Stations are also available. Feature separate speakers and remote control filmstrip projectors.

Model #WR-A $184.50
Model #WHD-A $219.50

QUALIFIED FOR PURCHASE UNDER NATIONAL DEFENSE EDUCATION ACT

Viewlex INC.
20 BROADWAY, HOLBROOK, L.I., N.Y.
In Canada—ANGLOPHOTO LTD., Montreal

By-Lined Film and A-V Reviews

Understanding Electricity

Review by Sister Mary Damian, O.S.B.

"Understanding Electricity" is a series of seven color filmstrips offered by the Jam Handy Organization. Each strip averages thirty-six pictures and is prefaced by a listing of the understandings which are developed in the film. Each strip concludes with a series of questions whose answers are gleaned from the presentation. These films are excellent teaching aids for junior high school science and gain for science its proper recognition in the total scheme of education.

The individual titles are:

1. What Is Static Electricity?
2. What Is Current Electricity?
3. How Most Electricity is Produced.
4. Producing Small Amounts of Electricity.
5. Electromagnets and How They Work.
6. How Is Electricity Used in the Home?
7. Using Electricity Safely.

Strips 1 to 6 present their basic principles in simple terms and use very ordinary materials for demonstration purposes. The teacher who enjoys having her pupils do the demonstrations with her will find many helps for adding deeper interest to her science period. Strip 7 shows the "why" of a short circuit, and gives tips on the proper care of electrical appliances.

These filmstrips will add knowledge to the student's every-day experiences with electricity and will thus enable this phase of science to be more intelligent to him. To the teacher of science who feels that her own background and training in this phase of science has been inadequate, that she is unprepared to meet the challenge of instructing in even the simple elements of electricity, these filmstrips will be priceless. The science teacher well-prepared for her work, will find them invaluable, too.

The price of the set is $36.50, individual filmstrips $5.75. The Jam Handy Organization, 2821 East Grand Boulevard, Detroit 11, Michigan.

SISTER MARY DAMIAN, O.S.B.
Mount St. Mary Convent, Pittsburgh 29, Pa.

Science Adventures

Review by Sister M. Xavier, O.S.U.

Science Adventures—Magnetism and Electricity, 4 colored filmstrips with

(*Continued on page 248*)

Newest, *Brightest* Picture...
Newest, *Truest* Sound...
Newest, *Simplest* Operation...

ALL EXCLUSIVELY with the all-new Galaxy® by GRAFLEX

Never thread a sound head again! Slide film into the convenient diagonal slot. Flip a single lever. Film is positioned, sound loop formed and sound head threaded—all instantly, *automatically!*

ALL NEW, THE MANY Galaxy features include an exclusive high-intensity lamp. Internal dichroic reflector eliminates light-absorbing, dust-catching condensers and external reflectors, and reduces heat on the film a full 50%!

Only Galaxy gives you the advantage of a unique new high-intensity lamp. Through push button controls two-levels of illumination are provided—"Normal" and "Hi." At "Normal," equivalent to 800 watts, lamp life is extended 10 times—to a minimum of 150 hours. For long auditorium throws, to bring life to dense prints, or for projection with a minimum of room darkening, the "Hi" setting delivers the equivalent of 1200 watts, a brilliance surpassed only by carbon arcs. For the finest sound in 16mm, Galaxy introduces an exclusive hiss-free phototransistor pickup. Plus a full 15-watt transformer-powered high-fidelity amplifier and removable speakers. For the first time you are provided with separate controls for bass and treble, for new richness in music, new clarity in speech, new quality in sound.

Fast and easy to set up and rewind, with exclusive push-button control, Galaxy is simpler, smoother, and quicker in operation than any other. Arrange with your Graflex AV dealer for a demonstration of its new exclusive advances in projector performance —or write to Graflex. **GRAFLEX®**

Rochester 3, New York. In Canada: Graflex of Canada Limited, 47 Simcoe St., Toronto 1, Ontario A SUBSIDIARY OF GENERAL PRECISION EQUIPMENT CORPORATION

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This is the **BESELER**

VU-LYTE II
OPAQUE PROJECTOR

INSTANTLY PROJECTS A TRUE COLOR IMAGE DIRECTLY FROM MAGAZINES, BOOKS, CHARTS, MUSIC, ARTWORK AND ACTUAL SPECIMENS...

It lets you build your own A-V Library. No months-in-advance scheduling. Preparation begins and ends with the few seconds it takes to slip materials into the projector whenever students are ready to learn.

VU-LYTE II is a lighter, brighter and more versatile teaching tool than any other opaque projector made. In social studies, stir students with huge, brilliant images of stamps or coins from foreign lands; in English, correct themes before the entire class; in science, make specimens giant, living diagrams. You teach with these and thousands of other techniques in every subject with a Vu-Lyte II in your classroom.

WRITE FOR FREE CATALOG . . . AND, IF YOU DESIRE, "NO OBLIGATION" DEMONSTRATION.

Charles Beseler Company
206 So. 18th Street
East Orange, New Jersey
Send me complete information on the Beseler
☐ VU-LYTE II OPAQUE PROJECTOR
☐ VU-GRAPH OVERHEAD TRANSPARENCY PROJECTOR
☐ Have a Beseler A-V Consultant contact me for a demonstration.

Name_____
School_____
Address_____
City_____ State_____
Phone_____

News of School Supplies and Equipment

Free Circular Slide Rule

A handy circular slide rule is in production at General Industrial Co., for engineers and others who must perform simple calculations.

This pocket-size calculator is simple to operate and its results are said to be accurate. Multiplying, dividing, and finding proportions is easy and fast with this convenient circular rule. Complete easy-to-follow instructions are included with each slide rule.

For a free circular slide rule write on your official school letterhead to General Industrial Co., 1788J Montrose Ave., Chicago 13, Ill., mentioning the name of this magazine. For teachers and students not requesting on official school letterhead, a charge of 50¢ is made for the rule.

SS&E 18

MISCO Instruction Units

A new line of elementary science instruction units offers advantages for both teacher and student. They are available from MISCO-Clinton Corp., Ann Arbor, Mich.

They are designed to demonstrate general scientific concepts rather than specific technical developments. The units cover basic categories, such as heat, machines, magnetism and electricity, as well as plants and animals.

The units are primarily for demonstration and incorporate sufficient features to permit pupils to participate in the activity.

A teaching guide is supplied with each unit which outlines activities and demonstration that can be used to teach basic science concepts. The units can be purchased as individual kits or in a combined package with MISCO mobil laboratories and storage cabinets.

A brochure describes the units. Address inquiry to MISCO-Clinton Corp., 6780 Jackson Road, Ann Arbor, Mich.

SS&E 19

Simple Machines Kit

Students learn faster by actually demonstrating experiences with a new Beckley-Cardy science kit. It covers all the major elements of mechanical advantages with levers, wheels, pulleys, inclines, etc.

Will interest all pupils in primary grades, and contains complete equipment for more than 15 clearly illustrated demonstrations. Each step is explained in text and illustration so that teachers without science background need merely one quick reading.

Write to Beckley-Cardy Co., 1900 N. Narragansett Ave., Chicago 39.

SS&E 20

Instructo Teaching Aids

Two colorful brochures cover the Instructo line of flannel boards and magnetic boards and associated visual teaching aids. Among 32 such aids are several in science.

Write to Instructo Products Co., 1635 N. 55th St., Philadelphia 31. **SS&E 21**

Seven Electronics Projects

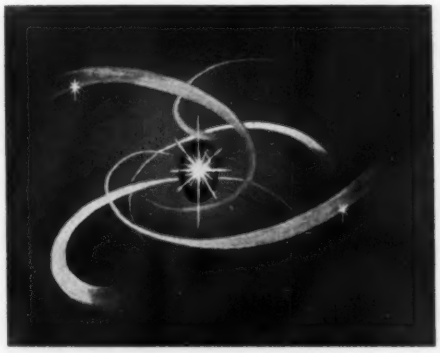
General Electric has entered the educational aid field with a series of seven "Educational Projects," designed to teach the basic principals of transistor electronics. They range from a Basic Transistor Lab to a Project Analog Computor.

An especially-written manual accompanies each kit. Together, the seven

(*Continued on page 240*)

"mysteries of science"

THAT POINT TO GOD



A NEW SERIES PLANNED

FOR THE TEACHING OF SCIENCE

IN CATHOLIC SCHOOLS WITH

sound filmstrips

These recordings were made at Maryknoll under the direction of Sister Julia Bertrand

The more deeply science penetrates the mysteries of the universe, the more remarkable and mysterious the mystery. As we enter the Atomic Age science leads the way of wonder. We know so much, yet our knowledge is partial and incomplete. One of the growing convictions in the field of science is that there will always be so much we do not know. We know so much—and yet we know so very little. These sound filmstrips stress the importance and value of what we know. They focus on the unknown, on the mystery of life itself, the mystery of law, harmony, order, and purpose in creation. Each filmstrip illustrates discoveries of science which pose questions that point to God.

ANY SINGLE FILMSTRIP AND ONE RECORD, **$8.50**

TWO FILMSTRIPS AND ONE RECORD, **$13.50**
IN THESE COMBINATIONS: MC-1, MC-2; MC-3, MC-4; MC-5, MC-6; MC-7, MC-8.

COMPLETE SET OF 8 COLOR FILMSTRIPS PLUS FOUR 33⅓ RPM RECORDS AND TEACHERS MANUAL

$50.

TITLES

MC-1 The Web of Wonder
MC-2 Air Conditioned Planet
MC-3 Wild Navigators
MC-4 A Strange Friend
MC-5 Cosmic Glue
MC-6 Magic White Sand
MC-7 Let There Be Light
MC-8 Gifts from Lightning

PLEASE SEND ME, WITHOUT OBLIGATION, THE SET OF 8 FULL COLOR FILMSTRIPS AND FOUR RECORDS ON "THE MYSTERIES OF SCIENCE THAT POINT TO GOD" FOR A 15 DAY PREVIEW.

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ADDRESS _____

CITY _____ ZONE _____ STATE _____

NAME _____

MAIL COUPON TODAY

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146-01 ARCHER AVE., JAMAICA 35, N. Y.

NEW FOR SCIENCE TEACHING

BIG, FULL-COLOR FLANNEL BOARD CUTOUTS THAT TELL THE STORY IN PICTURES!

New Milton Bradley flannel board sets make science easier to teach...easier to learn

EARTH IN SPACE—Colorful material on planets, seasons, eclipses, satellites, moon phases, layers of the earth's atmosphere. **No. 9105.**

MAGNETISM AND ELECTRICITY—Diagrams of magnets, magnetic fields, electron theory. Illustrations of motors, batteries, wires, etc. **No. 9106.**

SOUND AND LIGHT IN COMMUNICATION—Shows communication devices: ear, larynx, television, radio, telephone, telegraph. Sound wave pictures. **No. 9107.**

WEATHER—Pictures and diagrams of weather conditions, air masses, common weather symbols, instruments used in weather forecasting. **No. 9108.**

EARTH AND ITS RESOURCES—Both hemispheres with climatic conditions, physical features. Pictures of land areas and principal products. **No. 9109.**

Each of these new Milton Bradley sets contains full-color, velour-backed cutouts. They readily cling to any flannel board. Teachers' Lesson Guide, too. Illustrated brochure with instructions, facts. Grades 2 through 6. $4 each set.

You can get these new Milton Bradley Picture Cutout sets through your school supply distributor.

Idea: Tell parents how they can help their child's schoolwork at home with Milton Bradley Teaching Aids! At leading stores everywhere.

MILTON BRADLEY COMPANY
Dept. CE-111, Springfield 2, Mass.

Guaranteed by Good Housekeeping

MB MILTON BRADLEY

Commended by Parents Magazine

News of School Supplies

(*Continued from page 238*)

manuals constitute a basic technical library in transistor electronics.

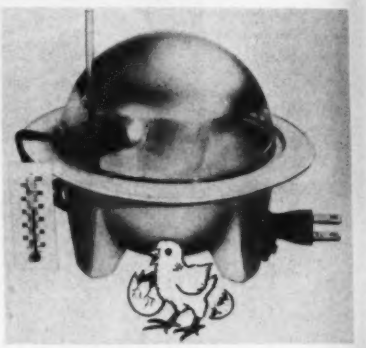
Also included are an Electricity Lab; and Advanced Electronics Lab; a Project Transistor Radio; a Project Transmitter; and a Project Intercom.

The seven kit manuals were prepared in collaboration with General Electric engineers and scientists. Educational value being the prime consideration, "each manual contains not only step-by-step construction details, but also explains the scientific principles involved."

SS&E 22

Electric Egg Incubator for Class Science Projects

The "Chick-Chick" is designed for school and home science projects. This electric egg incubator hatches chicks, ducks, pheasants, quail, etc.



The entire hatching process, from egg to chick, can be viewed through the plastic dome window of this 2-egg incubator.

The incubator comes complete with bulb, egg holder, thermometer, and instruction book. The base converts to a brooder after the chick is hatched. The price is $2.98, with discounts for schools.

For more information, write Insta Sales Corp., 71 Vanderbilt Ave., New York 17.

SS&E 23

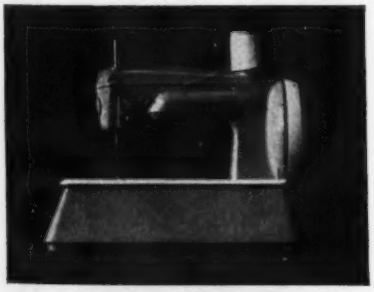
Physics Kits from Science Electronics, Inc.

Science Electronics, Inc., has completely redesigned the entire line of 30 physics instructional kits after acquiring the Lincoln Mfg. Co., which had supplied these apparatus kits developed by the Physical Science Study Committee.

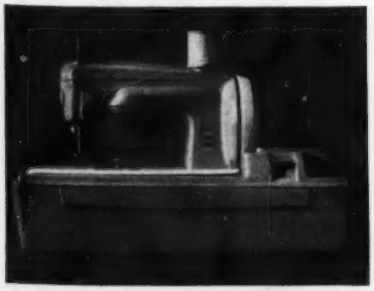
Because of the fundamental nature of the apparatus, many schools are using the equipment for courses other than the PSSC course. Under the PSSC course, students "discover" basic laws of nature using simple, but ingenious devices rather than performing "how to do it" style experiments. **SS&E 24**

(*Continued on page 242*)

For ages 3-7, New TRIMHANDY* machine...cuts out paper dolls...all kinds of paper creations! Guiding paper under presser foot prepares for real sewing.



For ages 6-9, New SEWHANDY* machine . . . makes real stitches on real fabrics for doll clothes and gifts. Even clothes for herself!



For ages 10 and up, New SEWHANDY Electric . . . with stitch control. Frees right hand for more intricate sewing.

LOOK WHO'S LEARNING ON A SINGER MACHINE NOW!

Today, even pre-schoolers are learning the fun of creating things.

Focusing the eye on the cutting line and turning the wheel of the TRIMHANDY machine prepares a young lady for the next step . . . real sewing, like Mommie does.

With the SEWHANDY machine she learns to thread the needle and make real stitches. Working on doll clothes teaches her basic garment construction. Then on a SEWHANDY Electric machine she can use both hands for more intricate work.

Starting the "high schoolers of tomorrow" *today* is another aspect of our broad educational program. Why not ask your nearby SINGER SEWING CENTER to demonstrate these new machines for you?

SINGER SEWING CENTERS

Listed in your phone book under SINGER SEWING MACHINE CO.

*A Trademark of THE SINGER MFG. CO.

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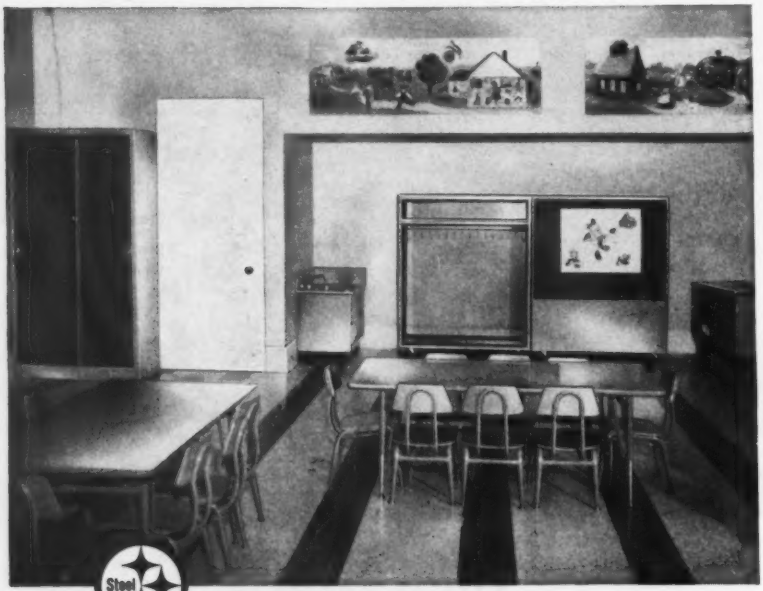
designed to meet your space requirements today — and tomorrow!



GRADE-AID® STEEL CLASSROOM EQUIPMENT

This modern, attractive classroom looks like part of a brand-new school — but is actually a remodelled classroom in the Ridge Avenue School, Neptune, N. J. Here, as in thousands of other classrooms, modular, mobile Grade-Aid Classroom Equipment saves space and valuable floor area. Should a new arrangement become necessary, the Grade-Aid units can be rearranged quickly and easily to meet any new requirements.

Heavy furniture steel construction in Grade-Aid equipment provides fire safety, extra durability and easy maintenance. Full wrap around bases conceal sturdy casters. Counter Storage models are available in six heights to fit all grades. And even with these and more quality features, Grade-Aid units are economically priced to meet any school budget.

If you plan to remodel, build or re-arrange classrooms, it will pay you to investigate the finest — Grade-Aid Steel Classroom Equipment, including sink units, science tables, wall and counter storage cabinets and wardrobes.

Ridge Avenue School, Neptune. New Jersey — modernized with Grade-Aid mobile classroom units for greater flexibility and convenience.

GRADE-AID

GRADE-AID CORPORATION
46 Bridge St., Nashua, New Hampshire

☐ Please send me your full color catalog on the complete line of new Grade-Aid steel school equipment.

☐ Please send me the name of your nearest representative.

Name _____

Title _____

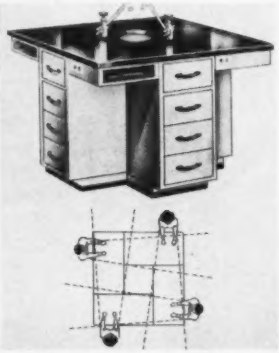
Please attach to your letterhead. CE-11

News of School Supplies

(*Continued from page 240*)

New Concept in Lab Tables

The "Clearview" science table utilizes a new principle of space arrangement for school science laboratories. The table is designed to emphasize individual activity by students, yet is equally effective for group activities.



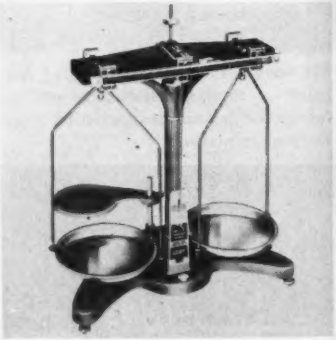
The table provides individual space for experiments, reference work, and note taking. Overall dimensions are 48" x 48" x 37" high, giving each student a working area of 31½" x 16½".

For additional information write, J. P. Flaherty, Laboratory Furniture Co., Inc., Old Country Road, Mineola, N. Y.

SS&E 24

Ohaus Heavy Duty Lab Balance

The Model 1600 Ohaus heavy duty laboratory balance is an overhead beam balance which combines large capacity (2 kg) with high sensitivity (50 mg). An adjustable platform with suspension hook will provide for specific gravity determinations. The stainless steel pans are 6" diameter and ¾ deep.



The balance is supplied with a center of gravity adjustment. Thus the user can regulate the sensitivity.

The base is designed to provide maximum stability and is equipped with a spirit level and adjustable leveling feet.

(*Continued on page 244*)

TOUCH-MASTER FIVE

underwood

TEACHERS' PET

Typing teachers like the new Underwood TOUCH-MASTER FIVE because it combines

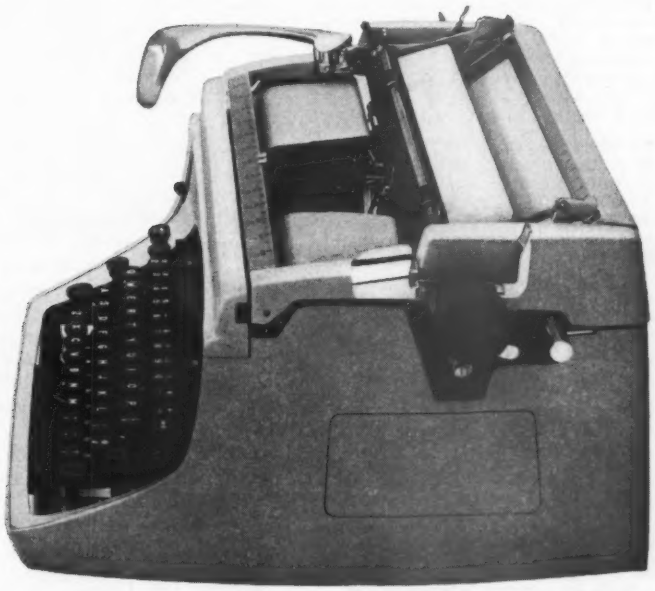
...Rugged construction to withstand rough classroom use

...Exceptional lightness of touch

...Exceptionally light, fast carriage return

...Instantly responsive touch tabulation

...Paper centering, title-heading centering and aligning scales and balanced margin indicators.



news from **Da-Lite**®

for regular or overhead projection!

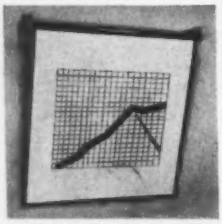
Vidio "A" SCREEN

with KEYSTONE ELIMINATOR

America's finest heavy duty portable tripod screen. New Keystone Eliminator holds top of screen 2" to 18" out from vertical for optically correct overhead projection. Sturdy, simple, easy to use. Only tripod screen that will extend to full square size with case in top position without bowing.

Your choice of screen surfaces . . . flame and mildew resistant V-3 Mat White or V-4 White Magic Glass Beaded in 50"x 50", 60"x60" and 70"x70" screen sizes. Also in 50"x50" size with Wonder-Lite silver lenticular surface. Top quality, heavy duty construction throughout.

New Da-Lite Keystone Eliminator Brackets



Sturdy, inexpensive brackets turn your Da-Lite wall mounted screen into an overhead projection screen. Brackets hold screen case 15" to 24" (adjustable) from wall to provide correctly slanting overhead projection surface.

Write for complete information and name of nearest Franchise Dealer!

Since 1909 DA-LITE® **Da-Lite Screen Co., Inc.**
Warsaw, Indiana

News of School Supplies

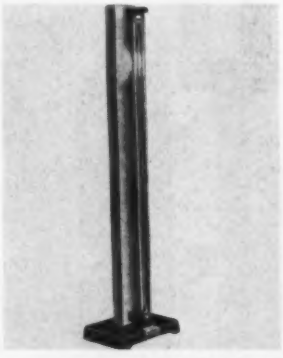
(*Continued from page 242*)

A relief etched stainless steel beam with center indicating sliding poise provides for readings from 0 to 10 gram x .1 gram divisions. List price is $42.50. **SS&E 25**

Thermal Diffusion of Gases Apparatus from Cenco

The thermal diffusion of two gases of different molecular weights may now be demonstrated with a new classroom apparatus announced by Central Scientific Co.

Cenco's Thermal Diffusion of Gases Apparatus consists of a sealed glass tube vertically mounted and containing a mixture of 50% argon and 50% hydrogen.



Running the length of the tube through the center is a wire filament that is connected to a 10 to 15 volt AC or DC power source.

When the temperature in the tube is uniform throughout, the gas molecules intermingle freely. But when voltage is connected to the wire filament, a horizontal thermal gradient is created in the tube that repells the heavier molecules toward a lower temperature area.

In a few minutes, depending on the voltage used, the heavier molecules of gas will have gravitated to the bottom of the tube, forcing the lighter gas upward. The evidence is a bright glow of the filament in the lower part of the tube while the upper part of the filament will be dark. The non-uniform glow of the wire is due to the different thermal conductivities of the segregated gases. Heat is conducted away from the upper portion of the wire to the wall of the tube at a rate that does not allow the wire to glow. The tube can, at this stage, be turned upside down with expected results.

For additional information, write to Central Scientific Co., 1700 Irving Park Road, Chicago 13, Ill. **SS&E 26**

New Incubator Saves Bench Space

Labline, Inc., Chicago, has introduced the first combination incubator and embedding oven designed to take the place

(*Continued on page 246*)

try triton tape

Triton, the premium magnetic recording tape, is engineered to stand up under rugged, day-in-day-out use. Exclusive Trionized process minimizes oxide shed, head friction, recorder wear and tear. And it's guaranteed: **If the quality of Triton Tape is deficient for any reason whatsoever, we will replace it with whatever brand you prefer.** Complete, no-risk Guarantee Certificate included with every reel. For clean, full-response recordings only quality tape can give, try Triton.

Write for free brochure and educator price list CE-11.

triton®

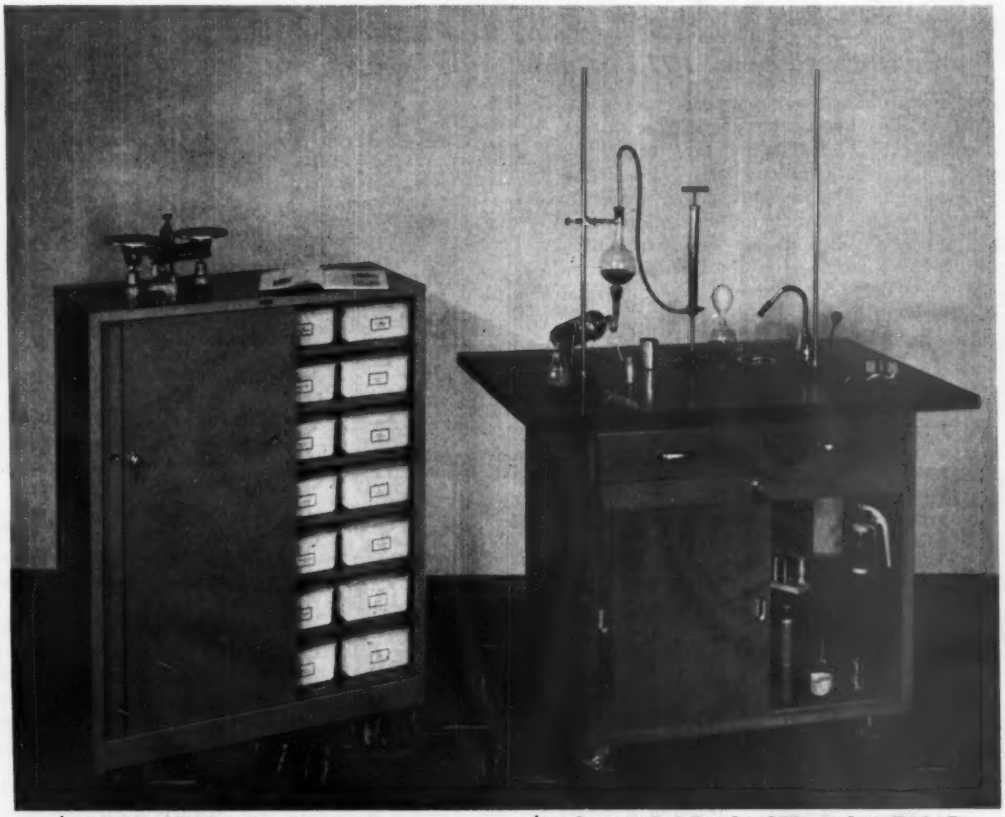
TRITON ELECTRONICS, INC.
62-05 30th Avenue, Woodside 77, N. Y.

Rol-a-Lab®

A COMPLETE PORTABLE LABORATORY

WITH PUMP AND SINK
INCLUDES ALL APPARATUS-SUPPLIES—AND A TEACHER'S MANUAL

For Teaching Science in Grades 5 to 9



*LARGE STORAGE CABINET *MOVABLE DEMONSTRATION TABLE

The Most Widely Used Complete Movable Laboratory Table.
Manual includes 138 procedures covering 30 basic
ELEMENTARY SCIENCE EXPERIMENTS

No. 7603. Rol-a-Lab. Complete Movable Table of Wood, Metal Cabinet, and all supplies and apparatus except a microscope.

Each, $675.00

No. 7600. Rol-a-Lab. Complete Movable Table of Metal, Metal Cabinet and all supplies and apparatus except a microscope.

Each, $600.00

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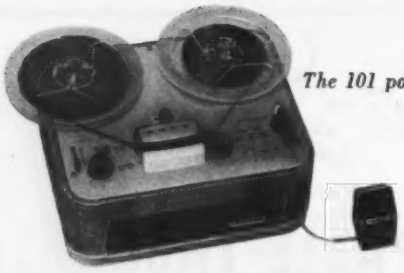

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News of School Supplies

(*Continued from page 244*)

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Fabry-Perot Attachment for Michelson Interferometer

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(*Continued on page 248*)

Now—science teaching in the elementary school made easy

Science Materials Center's unique "Singing Science Records" lend themselves to varied uses, kindergarten through grade 6

- **Singing Science Records— a completely new technique of teaching science through music**
- **Music and lyrics by the award-winning songwriting team of Zaret and Singer, in consultation with scientific authorities**
- **Adaptable for classroom, assembly programs, educational TV**
- **Ideal for motivation and introducing a topic.**

Representing an unusual new departure in the teaching of elementary school science — especially for teachers with no specialized science training of their own — the Science Materials Center's unique "Singing Science Records" series offers accurate scientific information in musical language that is both understandable and appealing to younger pupils.

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For orders, information, and FREE catalog of tested, age-graded science teaching aids, please write to Dept. M-283

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News of School Supplies

(*Continued from page 246*)

Interferometer, on its own carriage, or may be purchased separately to mount on existing M-3 Interferometers.

Compactness is a major advantage offered by this apparatus: 7 x 8 x 7 in. A plastic polyethylene cover is provided to keep the unit dust-free when not in use.

For additional information and a complete catalog of listings of other interesting physics equipment, write to Atomic Laboratories, Inc., 3086 Claremont Ave., Berkeley 5, Calif. **SS&E 28**

By-Lined Film Reviews

(*Continued from page 236*)

teacher's guide. (New York: Filmstrip House, 1960), price $20.

Magnetism and Electricity are four teaching filmstrips which can be used to supplement and enforce the four major phases of magnetism and electricity taught in the intermediate grades. Elementary and essential knowledge of these subjects is presented in a clear, orderly, and colorfully picturesque way. A basic explanatory introduction to each subject is given first. Then in simple but precise language the laws which govern these forces of energy are stated. Throughout the filmstrips stress is placed on man's use of energy. At the end of each filmstrip the scientific facts taught are summarized.

Not only is fundamental information graphically explained and demonstrated but different experiments are shown which can also be carried out easily in a school laboratory by this age level. For example, minute instructions and pictures are given which show how to make an electromagnet. Easily devised experiments are shown to demonstrate how electrons can be transferred from one substance to another: a comb rubbed through the hair; glass rubbed with silk. The films illustrate how iron filings on a paper or glass close to a conductor of electric current will distribute themselves into a pattern; how to induce an electric current in a coil of wire by moving a magnet inside the coil.

To be sure, teaching young minds the basic scientific facts covered in these filmstrips consists in more teaching than that which can be accomplished by showing these filmstrips. But certainly this visual aid will augment and enrich the teaching and study of these scientific facts.

SISTER M. XAVIER, O.S.U.
Principal, St. Patrick's Academy, Sidney, Nebr.

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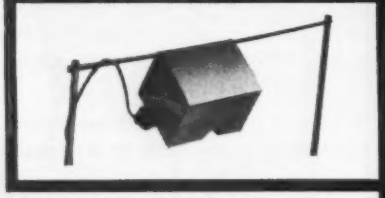

High Power Light Source Kit — Used for illumination of the Ripple Tank for projection of shadows of moving objects, and for use with slits or optical elements. Light from its window issues either from a point source (off the end of the filament) or from a line source (off the side of the filament). **Each $2.20.**

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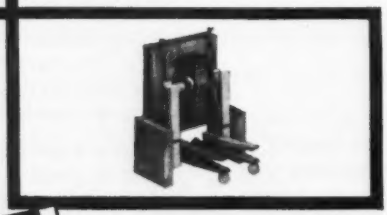

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Audio-Visual News

(*Continued from page 234*)

The series, *Nuclear Radiation,* explains the different types of radiation (light, radio, x-ray, nuclear, etc.), explains how they are detected, and how each is used for different purposes, in medicine, industry, studies of the earth.

The seven films in this series run from 15 to 28 minutes each, are 16 mm sound film, and are available in color ($150 each) and in black and white ($75 each). For each film there is available a 35 mm filmstrip with accompanying 33⅓ rpm record so that a teacher may pick up important highlights from the film and discuss them in class.

For additional information on the series, write Cenco Educational Films, 1700 Irving Park Road, Chicago 13. **A-V 25**

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Micro-Projector shows specimens to whole class... adds convenience, economy to science instruction!

RCA's new Micro-Projector is a basic "must" for every science classroom. Through the RCA Micro-Projector, the whole class *together* sees live specimens or prepared slides. This lightweight and versatile unit actually eliminates the need for individual microscopes!

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EDITORIAL

MONSIGNOR PAUL E: CAMPBELL, EDITOR

ALERT PARENTS GUARD CHILDREN

SOME PARENTS in California have been stirred to action regarding the type of test questions inflicted upon children without the knowledge of their parents. Writing in *The Steubenville Register*, August 31, 1961, Gerard E. Sherry tells us that a minority report of the Citizens Advisory Commission to the Joint Interim Committee on Public Education of California condemned the type of question used in a test called "Measurements of Wants" which was given at Ganesha Public High School in Pomona. A questionnaire asked the following on a true or false basis:

"Man has no soul or spirit. He is just a superior animal with nothing but a physical body."

"Values are all relative. There are no absolute standards of right and wrong."

"Religion is merely a crutch which insecure people rely on."

Some of the tests offered are designed for children in the fourth grade and are used to identify emotionally disturbed children. The job of identifying rests with public school teachers, many of whom are not qualified to make a diagnosis of emotional problems. The Citizens Advisory Commission takes strong exception to a "Moral Value Inventory test," in which children were asked:

"Which is worse:

(1) Spitting on the Bible?

(2) Spitting on the American flag?

Which is worse:

(1) Denying the existence of God?

(2) Laughing while the Star Spangled Banner is played?"

Mrs. Thomas K. Preston asked the Fresno County Board of Education to ban such tests from the Fresno County School System unless prior consent of parents is obtained. The board agreed to take the matter under earnest consideration with the view to making recommendations to the State Board of Education. Superintendent Walter G. Martin said that he as a parent would personally object if some of the questions mentioned were asked of his children or grandchildren. Unfortunately, many of the tests creep into schools without the knowledge or approval of the county school board.

THE CATHOLIC CITIZEN

HIS COUNTRY AFFORDS the Catholic citizen the rights of citizenship, and demands of him the discharge of the duties of citizenship. The first duty of the citizen is

obedience to law, to the ordinances of every jurisdiction to which he is subject. The authority of the State to make laws is derived from God, for the State must function in such a way as to promote man's welfare. "Man's natural instinct," writes Pope Leo XIII, "moves him to live in civil society, for he cannot, if dwelling apart, provide himself with the necessary requirements of life, nor procure the means of developing his mental and moral faculties. Hence, it is divinely ordained that he should lead his life—be it family, social, or civil—with his fellow men, amongst whom alone his several wants can be adequately supplied. But as no society can hold together unless some one be over all, directing all to strive earnestly for the common good, every civilized community must have a ruling authority, and this authority, no less than society itself, has its source in nature, and has, consequently God for its author. Hence it follows that all public power must proceed from God. For God alone is the true and supreme Lord of the world. Everything without exception must be subject to Him, and must serve Him, so that whosoever holds the right to govern, holds it from one sole and single source, namely, God, the Sovereign Ruler of all. *There is no power but from God* (Rom 13: 1)."

There is no right without a corresponding duty. Among the duties of the citizen is a definite responsibility to government. This responsibility has its basis in the obligation of patriotism. St. Thomas Aquinas finds the patriotic responsibility of the citizen summed up and expressed in the virtue of *pietas*. This one word brings home to us that duty to country is an expansion of duty to family. The ancients associated the citizen's indebtedness to his country with the indebtedness he has to his parents. Through his

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country there comes to the citizen the heritage of the world's knowledge and achievement, his means of livelihood, and the conditions, humanly speaking, that make possible the pursuit of happiness. The State on its part has the duty of protecting the public against its enemies, whether internal or external, and of providing the individual citizen with the opportunity of developing himself intellectually, culturally, and vocationally in accord with the standards of the civilization of his day. Each citizen should receive an education which will fit him for the discharge of his duties toward the State. Gifted individuals may and should receive the special education that will fit them to proceed along the lines of their native ability, but every citizen is entitled to the general education that will prepare him to discharge the duties of citizenship and enable him to make his best contribution to the material well-being or intellectual advancement of the people. "The vital interests of the community," writes Dr. Shields, "demand that every citizen should lend to the State intelligent co-operation in the making and enforcing of just laws, in the administration of public affairs, and in the promotion of brotherly love and genuine co-operation among all the elements of the population."

Respect for public authority is a second duty of the citizen, a duty which many Americans are inclined to minimize or even to reject. They choose officials from among their own numbers, and sometimes fail to show them the respect that is due to the office to which they have been elected. The public official may lack personal worth and dignity, but his power is from God and the position occupied demands respect. Habitual respect for elected officials and the office they hold disposes the citizen to respect and obey law.

The duty of loyality follows upon obedience and respect. The loyal citizen is one who is faithful and constant in allegiance and service; he is ready and eager, not only to obey the laws, but to support and maintain the political institutions of his country. He withholds obedience or support only when he is morally certain that the laws of the government are in the wrong. Loyalty does not mean that he cannot favor change, through legitimate means, in the Constitution or in established institution.

Obedience, respect, and loyalty are the constituent elements of patriotism. Patriotism is at times a vague sentiment; it has sometimes been called the last refuge of the scoundrel. Certainly it should not be confused with boasting, jingoism, imperialism, national aggression, national jealousy, or contempt of foreign nations. The ancients had a narrow view of patriotism. They despised their enemies and treated captive foes with pitiless cruelty. For us, however, the man is more than the citizen, humanity more sacred than nationality. Perhaps the best description of patriotism is that of Bishop John L. Spalding, "There is a higher love than love of country—the love of truth, the love of justice, the love of righteousness; and he alone is a patriot who is willing to suffer obloquy and the loss of money and friends rather than betray the cause of truth, justice, and righteousness, for only by being faithful to this can he rightly serve his country."

The good citizen pays his taxes, because he knows that the citizens are morally bound to provide the necessary revenue for the conduct of government; he gives military service when required by law because this is a matter of the greatest importance to the public weal; he complies with the duties resulting from his electoral functions, and does not attempt to justify his failure to vote through a blanket accusation that "politics is rotten." Catholic moral theologians stress the obligation of the citizen to take part in the election of candidates for civil offices. The quality of the government depends upon the honesty, integrity, and capacity of the elected officials. Their activities are not restricted to questions of politics; social, industrial, educational, moral, and religious subjects are regulated by legislative bodies and administered by executives elected by the voters. Hence, the obligation of the citizen to participate in elections and to support fit candidates is correspondingly grave. In certain situations, says Noldin, an upright Catholic is bound by a grave obligation to become a candidate for an administrative or legislative office. Tanquerey teaches that upright citizens should organize and participate in political associations, and not leave the conduct of political organizations to professional politicians.

The American Catholic's profession of the Catholic faith does not interfere with his performance of his duties to the State. He knows that reason and equity demand that things civil and political be subject to the civil authority, that Christ Himself has commanded that the things of Caesar be given to Caeser. He owes no obedience to any church authority attempting to step within the frontier of temporal jurisdiction, just as he owes no obedience to any civil power that invades the domain of the Church. He does not owe superior temporal allegiance to any power above that of his obedience to the principles of the Constitution of the United States. Nor does he fear that the Pope of Rome wishes to take over the White House. To sum up, in the words of Archbishop Ireland: "The partition of jurisdiction into the spiritual and the temporal is a principle of Catholicism; no less is it a principle of Americanism. Catholicism and Americanism are in complete agreement."

The American Catholic exults in the fact that America is a Republic, and that the spirit and the form of government is democracy—the government of the people, by the people, for the people. There is no danger that he will be subjected to ecclesiastical influence in favor of a change of government, for as Pope Leo XIII has said, there is "no reason . . . why the Church should prefer one form of government to another, provided that the forms that is chosen be just

(*Continued on page 311*)

By SISTER MARY NICHOLAS, R.S.M., M.A.

Methods in Elementary Science

A METHOD IS A MEANS to an end. Therefore no teacher can think of a method of classroom presentation until he has clearly thought out the answers to "What am I going to teach?" "To whom am I going to teach it?" and "Why am I going to teach it?" A method is an answer to "How am I going to teach?"; the "what," the "to whom," and the "why" must precede the "how." Our teaching experience, academic preparation, and personality will be factors in the final decision on a method for any lesson.

However, there are certain general statements that can be made in the consideration of methods and their uses. In general, a master teacher never tells what she could ask; never explains what she could show; never solves what she could lead a child to solve. A master teacher knows that knowledge is only one facet of education; thinking, evaluation, and judgments are other desired goals. Therefore a teacher must choose the method that she feels will meet the goals of Catholic education, and the objectives of the elementary science course of study. The needs of her class, and her own preparation will also be contributing factors.

Remote Preparation

To do this a teacher must begin with her method of preparation. This remote preparation for the science lesson is of the utmost importance. Because of lack of experience in the teaching of science, or an inadequacy in scientific studies, the elementary teacher is timid in this teaching area. There is a need for a collection of materials to be used in the presentation of any science lesson at any grade level. Simple as these materials may be, you must know what they are and where they are.

Let us presume you are a beginner. Where will you start? First, you must scan your course of study and determine the time you plan to spend on each unit. You have no course of study? Then take the textbook approved by your diocese or adopted by your school. You must be familiar with the *total* presentation. What topics are included? Is there a sequence or is each topic independent? If the latter is true, pick out the one in which you feel most competent. Here are a few suggestions.

Read through the *entire* unit in the textbook. Now take your manual. Read through the entire presentation. Keep your textbook open as you read. Take a notebook; label it science. Divide it into parts to match your units. Keep all your notes in this book. Make four lists: questions to be asked, new terms to be known, concepts to be learned, materials to be used.

Your Materials

As you list your materials you may wish to divide these into areas of procurements: you, the maintenance man, the child, a parent, your requisition list. The value of this listing is your awareness of what you need. You now become a collector of boxes, string, tubes, toy magnets from your nieces and nephews, a chipped lens from the optician, plastic containers from the cook, empty coffee cans and gallon jars from the bursar, pieces of aluminum foil, wax paper, etc. Shoe boxes are convenient for storing your "equipment." Label the outside of your shoebox either by unit or topic. You will find that your children will be your greatest source of supply.

Now you have a list of questions to be answered; you have the list of concepts you want the children to understand and remember. You have some materials, and some ideas are beginning to percolate. No, this is not the time to think of method—not yet. Do you have some other elementary science textbooks? Is there anything in them on the unit you are planning? Check through quickly.

There may be a clearer statement of a concept, a more interesting manner of presenting a question, a simpler experiment. Make notes of these on your list in your notebook. A colored pencil will help in rewriting. Don't be content with making a note of the text and page. Select what you want and copy into your notebook. The reasons are evident. In organizing the work and putting it down in writing, you are developing your knowledge and confidence.

Filmstrips and Other A-V Aids

Do you have any filmstrips or other visual aids you could use? Don't overlook magazine ads. If you have a copy of *Educators Guide to Free Science Materials*, published by Educators Progress Service, Randolph,

Sister Mary Nicholas is principal of Cathedral Grammar School, Trenton, N. J. A former elementary science chairman for the New Jersey Catholic Round Table of Science, and its president, Sister has conducted workshops in elementary science at diocesan institutes in Portland, Me., Baltimore, Md., and Washington D. C., and at summer institutes at two colleges. She is the director of the Science Tape Institute held at Georgian Court College, Lakewood, N. J., this summer, having held that position last summer at Trenton. She has taught general science, math, and physics in high school and has been principal of two schools.

A student leader from grade 7 helps children of the fourth grade complete their circuit at Cathedral Grammar School, Trenton, N. J.

Wisconsin, this will greatly increase your source of visual aids–free. Again write a brief note of request on school stationery immediately so that your material will be on hand. List the filmstrips by code number next to your question or concept. Is there a source of free films near your school? Are there any that are valuable in bringing to the child experiences which are impossible for him to share in reality?

Several excellent books listing simple experiments are now on the bookstands. Two of these books are: *Simple Science Experiments* by Harold Visner and Adelaide Hechtlinger, published by Franklin Publishing Company, Palisade, New Jersey and *One Hundred and One Science Experiments* by Illa Podendorf, published by Childrens Press, Chicago, Illinois.

Check with your library, either school or public, as to which books are available for this unit. The books on elementary science are excellent teacher source material as well as children's reading. Books by Irving Adler, Willie Ley, Isaac Asimov and many other leading scientists have presented the most complicated science theories simply and accurately. Therefore secure your books for your classroom library well in advance of your unit. Skim through these books seeking both knowledge and ideas. Keep your notebook handy for you may want to jot down a diagram which you can use on the blackboard, a definition of a term, or a new presentation of an experiment.

World Book Encyclopedia, as well as *Compton's Pictured Encyclopedia* and the *Book of Knowledge,* publish excellent teacher guides on many units, such as Weather, Communication, Space, etc. Check the reading guide of these encyclopedias and read over the topics. Note questions, terms, concepts, materials.

There remains one more step in your preparation. Secure a general science school text. Reading over this material will not only help your mastery but will enable you to understand how you can best help your children. The material which is today being presented in the ninth grade as general science will within the next few years be presented in our seventh and eighth grades.

Readable Paperback Series

Two excellent and inexpensive sources of teacher material are found in the paperback series known as the Science Study Series, published by Doubleday Company, and the Ann Arbor Science, published by the University of Michigan Press. The *Science Study Series* have been prepared for the high school students. Therefore they are very readable and yet will enrich your knowledge and mastery of the topic under preparation. The Ann Arbor Series is more advanced and will supply a more detailed explanation.

Elementary School Science and How to Teach It by Glenn O. Blough, Julius Schwartz, and Albert J. Hugget, published by The Dryden Press, is an excellent source book for all elementary teachers. *The Grade Teacher, Instructor, The Science Teacher* and the *Elementary School Bulletin* published by the National Science Teachers Association contain many ideas tried and developed by teachers themselves. If you have these magazines to your personal use, tear out the articles of interest and file them. In this way you will build up a rich source of up-to-date ideas and materials. Many of the children bring in articles from current publications. These, too, can be filed but be sure the date and source are noted on the article. Discard these articles as they become out-dated.

In the six, seven, and eight year olds, there is little distinction between fantasy and reality. In a world in which there is little actual experience with the beauty and order of nature, there is a great need for the little child to see, to hear, to smell, to feel the living world around us. The primary teacher is very conscious of developing the visual and auditory skills needed for reading. The elementary science class is the ideal workshop for these same skills.

Children Lack Experience of Growing Things

So many of our children are completely removed from the knowledge of experience of growing things, either plant or animal. Food comes in packages; milk, in cartons; fowl, in cellophane; hams, in cans; potatoes

Fourth graders at Cathedral Grammar School, Trenton, N. J., receive lesson in pulleys from Sister Mary Leona, O.S.B., with an assist from student leader from grade seven.

are powder to which you add water; vegetables are frozen masses to be heated in boiling water for a few minutes. Fresh vegetables and fruits are cleaned and cellophaned. Any connection of the fresh vegetables or fruits to a plant from the soil is carefully removed. Even orange juice today comes in cartons on the porch each morning.

Does this affect children? Listen. A lay teacher had received some flowers for her birthday. She singled out a carnation and exclaimed, "What a beautiful carnation!" A little voice piped up, "Oh, that's the one the milk comes from!" There followed that day a discussion of cows and milk! A visit to a dairy farm brought cries of wonder, "The cow is so big!" "She has big eyes!" "He drinks water." "She has big flat teeth!" "Teacher, is it a he or she?" "Look at her feet!"

Concepts:

Animals need food, water, and shelter.
Some animals are useful to man.
Animals have babies.
Animals that supply food to man must be kept clean.
Milk must be kept covered and cool.

Terms: milk, carton, bottle, dairy, cow, bull, calf, farm.

Questions:

What animals have feet like a cow?
What food do these animals eat?
What kind of foot does a cat have?

And so we could go on and on.

To the actual visits to the dairy farm, the zoo, the park where plants are growing in the soil, birds are calling, squirrels are jumping, leaves are falling or buds are sprouting, there can be added the classroom aquarium or terrarium. This is the time for the gallon jars!

From Egg to Frog

The evolution from egg to tadpole to frog will furnish your third graders with material to write about, new words to look up, new cries of wonder at the marvels of the creatures of God. In our school, the development of hind legs, forelegs, eyes, and lungs of our tadpoles is of interest from first to eight grades. Heads of all ages appear in the door of the classroom to see if "It's a frog yet." You see most of these children have never seen a frog!—except in the cartoons.

Have you ever heard a child giggle with delight as he lies on the grass and lets the grass tickle his cheek? Or hear the cries of joy as a child rolls down a grass-covered hill? I have.

At our recent festival I watched the little ones line up for a ride on a "real pony." One little boy's hand gently rubbed the pony's back. You could see his thoughts. The pony is so warm and soft.

Will it be hard to explain to a child who has learned the beauty, of variety, the warmth, the softness of living things, the Beauty, the Power, the Love of God? Creatures lead us to the Creator. The order and beauty of the universe is a proof of the Divine Cause. What did Saint Thomas Aquinas say about the senses? Let us develop the power of observation in the primary grades so that we preserve the gift of wondering for our middle grades.

Pupils of grade seven at Cathedral Grammar School, Trenton, N. J., are learning what a cell is.

A wall chart, a model of the skeleton, and a reference book serve seventh graders at Cathedral Grammar School, Trenton, N. J., as they learn about the human skeleton.

Understanding Emphasized

In grades 4, 5, 6 it is understanding that should be emphasized—understanding of basic concepts. Concepts are general statements like:

The earth is a magnet.
Electricity needs a circuit to make it move.
Sound travels through solids, liquids, and gases.
Light can be reflected, transmitted, or absorbed.

This understanding must be guided, developed, and

organized by the teacher. Children are ready now to classify their knowledge of living things. They are better able to deal with an understanding of their earlier observations of light, heat, magnetism and electricity, the earth, its structure and origin.

Let us consider the second concept listed above. Electricity so often causes worry to the elementary teacher. Relax about a shock. A dry cell or two will meet your needs. A dry cell gives $1^1/_2$ volts of electricity.

Now the Circuit

Before the class arrives, arrange an electrical circuit on your desk or on a table nearby. A card table is handy. It can easily be put away when not needed. Now the circuit! You will need about three feet of bell wires. Ask one of your fathers for this. You will also need some scotch tape, paper clips, friction tape, a flashlight with two dry cells that work! Take the dry cells out of the case. Unscrew the electric bulb from the front. Now you are ready.

1. Scotch tape a bare end of the bell wire to the elevated top of the dry cell. Call this dry cell A.
2. Cut off about 12 inches of the bell wire.
3. Scotch tape the other piece of bell wire to the bottom of the other dry cell. Be sure that the wire is bare where it is taped to the metal on the bottom of the dry cell. Call this cell B.
4. Put the two dry cells, A and B, together so that the top of B touches the base of A. Use the friction tape to hold the cells together,
5. Straighten out one paper clip.
6. Wind this around the base of the bulb. Use the friction tape to hold it in place. Be sure the contact point on the bottom is not covered.
7. With a paper clip fasten the wire from cell A to the wire from the bulb (the straightened paper clip). Make sure that the wire is always bare when you are making connections.
8. Touch the wire from cell B to the base of the bulb. Light! I hope! If not, check your connections.

You now have a circuit. Do this for recreation!

Let us experiment further. Put the base of the bulb on a penny and touch the wire from cell B to the base of the penny. What happens? Let's try again. Put the base on a wooden pencil and touch another part of the pencil with the end of the wire from cell B. What happens? Use another clip, a nickel, a dime, a piece of aluminum foil, paper, string. What happens in each case?

Have the children make two lists. In one list record the items that carried electricity. How do you know this? Yes, the bulb lights. In the other list record the items that did not carry the current. Of what material are all these items in list one composed? What do you call these items? What name is given to the items that did not carry the current? How are these items used?

Concepts:

Electricity needs a complete path in order to move.

The path is called a circuit.

Materials that transmit electricity are called conductors.

Materials that do not transmit electricity are called non-conductors or insulators.

Using this same circuit you can develop an understanding of the switch and a fuse which is a safety switch. Many of your children will suggest other ways of connecting a circuit using the same or other similar material. These may be far superior to this suggestion.

In grades 7 and 8 the observation skills, and the development of scientific concepts can now be applied to an understanding of many of the technological developments in whose midst they live. These developments—the fruits of the labor of his fellow man—should call forth from these teen-agers an attitude of appreciation, respect, and reverence for the dignity of man whose littleness in this universe is so great but whose greatness rests in the proper use of God's gifts of soul—understanding and free will.

In grade six each pupil does his own experiment on reflection under direction of Sister Mary Nicholas, at Cathedral Grammar School, Trenton, N. J.

Basic Concepts Applied to Daily Living

A mathematical presentation of some of the observations of the primary grades and a further development of basic concepts as applied to daily living is now in order. Let us consider the law of reflection of light. Seventh and eighth graders will be introduced to the use of the protractor and an understanding of angles and how they are measured. With a plane mirror, which can easily be procured in these grades from either boy or girl, a fountain pen flashlight, each child can discover this law for himself. One other item is needed—a slit to guide the light to the mirror. A painter's comb will do if black paper is used to cover all the openings but one.

Of this fact I am sure for having wondered about its possibility I developed a tape lesson using this idea. Two years ago, I was fascinated watching a group of eighth graders from Our Lady Star of the Sea School, Atlantic City, New Jersey, work out step by step this

(*Continued on page 267*)

By SISTER TERESA LEONA, S.S.J.

Projects for Elementary Science

EVERY GOOD THING is the result of a dreamer dreaming great dreams, and then getting down to work. Thoreau once remarked: "If you have built castles in the air, your work need not be lost; that is where they should be. Now all you have to do is to put the foundations under them." It takes imagination to produce something worth having. It takes imagination to be something. You must possess a mental grasp of the thing, conceive a desire to obtain it, and follow up the long process of development. The imagination always leads the way with a bright picture of the stage not yet reached.

To you, my young scientists, I say, "Cherish your visions, cherish your dreams. Keep on dreaming dreams for each of us has a commission to carry out a definite project in God's Kingdom." Longfellow in his famous poem, *The Builders,* says:

All are Architects of Fate,
Working in these walls of Time;
Some with massive deeds and great,
Some with ornaments of rhyme.

Our poet could very well have had our young student scientists in mind as he continued:

Nothing useless is, or low
Each thing in its place is best

And a final admonition to the student launching out on the task of a science project:

Let us do our work all well
Both the unseen and the seen

Now, my future scientists, let us take a Magic Carpet Express from wherever you may live and come in imagination to our science workshop where several young boys and girls like yourselves are preparing their first project. Some of you will be late in arriving. Come directly to the grade school library where you will find the students at work. You seem surprised when told that they are working in the Library. Remember, classroom work alone never made anyone an expert in anything. This holds true for football playing, nuclear physics, or history.

Knowledge is something that has to be used in order to be understood thoroughly. This knowledge about your subject will be increased by reading every book, magazine, or article that you can procure. Reading about your particular topic will aid you in doing an intelligent and well-developed project. Besides the knowledge that you will acquire, you will gain a greatly increased understanding of the philosophy and technique that are basic to all the sciences.

Each Selects Own Project

Each student selects his or her own project. That's the interesting point. You choose your own! You plan your approach to the problem. You will criticize your techniques as you go along and analyze your results. Do not forget to develop the method of showing your results to others. Imagine the fun that you will have in doing a project all by yourself! Did I say *fun*? That's right. The great physicist A. A. Michelson was once asked why he spent so much time determining the value of the velocity of light. Many reasons were given but his honesty got the better of his intentions and laughingly said, "because it is such fun."

So there you have it. Enjoy your research while working and planning your science project! Think and plan before you act. Do not jump all over the map. Limit yourself to a problem that has a good chance of being carried out. Repeat your experiments over and over again. Keep accurate and complete account of your records. Date all your records. Be accurate in *your* observations not in what others have seen. Use inexpensive and at hand material.

Let us leave these project information seekers alone with their books and travel down the corridor to the classroom on the right. There we will find a variety of groups at work. These have already completed their reading background and are now well on their way to a completed reality. As we observe each group or individual at work we shall note their varied selections.

Work with the Microscope

The microscope holds fascination for this group of young microscopists. As you can see several are listening to a taped recorded lesson which explains to them the proper way of preparing a slide. There are two lessons going on at the same time. One group interested in working on the bread mold is listening to the necessary instructions while the other group has a lesson on the onion skin! The bread mold group have spent

Sister Teresa Leona teaches grades seven and eight at Queen of Peace Junior High School, North Arlington, N. J. She has had twenty-nine years elementary teaching experience. Sister is Newark chairman of the N. J. Catholic Round Table of Elementary Science, and a member of the N. J. State Teachers Association. A graduate of Chestnut Hill College, Philadelphia, she has demonstrated before conventions and given workshops on science at the elementary level. She was instructor at the Science Tape Institute of the NJCRT for the past two summers.

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many hours and days watching the growth and advancement of that mold. In the beginning things didn't turn out just as they had expected, so they started all over again. Patience is required here. In order to get a good mold, time and patience must play an important part. Each day the mold will have to be examined. Records are kept at each examination and it is advisable to make drawings or even better still a snapshot, colored if possible, of the different stages in growth. This will prove an interesting project. Observations under different power magnifications will produce an opportunity that the alert student will spend many fruitful hours.

These pupils at Queen of Peace School, North Arlington, N. J., study life under the microscope as they follow directions from a tape recorded lesson. Observing them is the author.

Another group working also at the microscope can be seen examining the onion skin. Here again the young student will find that he or she can spend many enjoyable and profitable hours. Make notes and record all data discovered when examined without the addition of any liquid. After it has been observed several times then raise the cover glass and insert a drop of iodine. Watch their little eyes dance with delight as the observers note the details in the cell that are now brought to the attention with the application of the iodine! Try and get them away from their microscopes; you will have a difficult task.

Model of Atomic Power Plant

You all know our nearest neighbor in the sky who lights up the lamp of welcome for us—Old Man Sun! The "lucky old sun" does more than roam around heaven all day. He is burning up at the rate of four million tons per second. To tell you the truth, the sun is our nearest *atomic power plant!* That is what a student decided to work on after spending several weeks in reading, reading, and then more reading! The atomic power plant was to be his destination via the magic of all the fun he would realize in preparing this science project. Did he realize his dream? The materials he used? They were indeed very simple. A salt box, tin cans, macaroni for the pipes, and small elbow macaroni for the elbow pipes was the extent of his expensive project. Let us listen to the student, Nicholas Rosani, a student in the eighth grade, as he describes the project.

"Heat generated by the splitting atoms in the Reactor is picked up by the liquid coolant and circulated to the Heat Exchange. Water in the Heat Exchange Coil is turned to steam and used to run the Turbine. The Turbine operates the electrical generator to produce electric power. In the Reactor there are two units: the Quel Unit and the Coolant Unit. The Uranium which boils the water is contained in the Quel Unit. The Coolant Unit draws in water and pushes it out the Coolant Pipes into the Heat Exchange. In the Heat Exchange Coil the pressurized water reaches a temperature where it turns into steam. In order for the steam to pass through the Turbine it has to turn a large propeller-like wheel.

"The wheel is attached to a shaft which is connected to the armature part of the Generator. A Generator is a machine which changes mechanical energy into electrical energy.

"After the steam has reached the rear of the turbine the release into a pipe occurs which leads to the opposite end of the pump. By this means the same pump that forces fresh water in, expels the used water.

"An Atomic Power Plant uses Uranium instead of coal. This is a great advantage over the old-fashioned steam plant because Uranium lasts much longer than coal and it produces more energy. To be exact for every pound of Uranium it takes sixteen thousand pounds of coal to equal it in energy. Uranium bought on a large scale is also much cheaper than coal.

Nicholas explains to visiting Sister M. Leona, O.S.B., the mechanical operation of his "Atomic Power Plant," as his teacher, Sister Teresa Leona looks on at right.

"Many people think that Uranium is rare but scientists tell us there is about as much Uranium as there is silver. It has not been all discovered yet, since most of it is well buried under mountains of dirt and rock. Man has just begun to use

atomic energy; in the future it will take care of many of man's needs. Not too far off most people will have installed in their homes small atomic furnaces. With a pound of Uranium metal, slightly larger than a cube, a family can expect heat and light for about nine thousand years. It will also supply the houses with electricity that will operate utensils that man has not yet even dreamed, never before possible before the Atomic Age."

You can see from the above that reading and research does more than increase the student's knowledge. It gives him the desire to keep on reading and exploring!

Checking the day's temperature fascinates these girls at the Queen of Peace School, North Arlington, N. J. Their charts in the background show the daily record these girls kept.

Keeping Temperature Records

We all know when it is hot, when it is cold, and in general when the weather does not suit us. Did you ever stop to realize how interesting it must be to keep an accurate record of the changes in the daily temperatures? That is what Charlotte has decided to do as her project. We see her explaining to the other two intent listeners her experiences. Let us listen in too.

> First I decided to become better acquainted with the use of the *thermometer*. Remember we had a lesson on tape in our class on the various kinds of thermometers, their uses, and the necessity of knowing how to use and read them? Since then thermometers fascinate me. I began to observe the temperature each day and found it interesting to note the changes. In order to check myself, I found that the most profitable way to watch the rising and fall of the outdoor and indoor thermometer was to start keeping records. That is just what I have been doing for several weeks. It is also interesting to check the report on TV in the evening when the daily report of temperatures is given. Then I can check to see how accurate I was in my own observations. Try it. It is such fun!

Checking Wind Speeds

Now let me introduce you to another group of boys, both greatly interested in the speed of the wind! "Do you really think it is possible to get an accurate account of how fast the wind is blowing?" "Of course it is, for I have tried it." That little discussion was between Stanley, the builder of the anemometer, and Eddie, who decided to keep a strict watch so that Stanley would not make a mistake. Stanley checked the revolutions made by the anemometer while Edward kept a close eye on the second hand of the watch. They recorded their observations on several different occasions and after several checks they called the Weather Bureau just to satisfy their curiosity! Much to their surprise they were not too far away for the correct amount of speed. Encouraging for the beginner, indeed! Keep it up, boys. Remember practice makes perfect!

No doubt you are familiar with the poem of Susan Coolidge entitled, How the Leaves Came Down. Recall the stanza that opens with the line: "'Come, Children, all to bed,' he cried."

It was in this field of Nature that Beatrice and Jane are preparing their project. They have found great delight in dreaming about their leaves. This project will lead them to a world of vast knowledge. After they have spent many happy hours in reading about their topic they set out to collect as many varied kinds of leaves that it was possible for them to find. Now we see them trying to identify according to their proper groups. Beatrice is well on the way to obtain an amount of wealth that no one else could ever impart to another. She and Jane are determined to get all the information that is available on each leaf in their collections. Quoting Beatrice, "The study of the veins is not too difficult but the large number of different leaves surprises me! I'll never get finished." Knowing that she is on the right path in the search of knowledge and with the proper guidance, she can be left alone now to travel along, and dream sweet dreams of the oak and birch.

Stanley counts the rotations of the anemometer as Edward times the activity, at Queen of Peace School, North Arlington, N. J. They even checked with the weather bureau and found their observations close.

Experiment With Static Electricity

Boys and girls of all ages will find many opportunities of experimenting with static electricity. Static

Joseph is explaining to fellow scientists at Queen of Peace School, North Arlington, N. J. how to grow crystals. His display and posters give explanation of the steps followed.

charges can be generated by rubbing a rubber comb through the hair. Stanley prepared his project on the electroscope and after many failures finally succeeded in generating enough static electricity to obtain a charge on the tinfoil sealed within the jar.

Patricia, on the other hand illustrates the effect of rubbing silk on glass. She delights in watching her paper men dance as the result of the static electricity generated by rubbing the silk briskly on the glass.

The experiments in the magnetic attraction illustrate the point that the earth itself acts like a magnet. The earth's magnetic field exerts an influence on all of man's compasses, causing them to line up in the direction of the field, in generally north-south direction. The boys are trying to discover for themselves the different reactions of the various shaped magnets.

Joseph Studies Crystals

The growing of crystals has kept Joseph busy for quite some time. But the results were very gratifying after so many failures! Let him speak for himself. "Illustrating the different systems into which crystals fall was the easy part. I first did some research on the different groups and made models of them. Next came the actual growth of the crystals, which was the hard part but gave plenty of well spent time. Many factors come into view when crystal growth starts including exact solution, humidity, temperature, and speed of growth. Some of my first attempts failed, but I am now overcoming these problems."

Sources of Project Ideas

It is entirely up to the teacher to arouse in the students the capabilities that each possesses. Many students are shy and timid about even attempting such a thing as a science project. There are many books available with varied suggestions for the anxious student and particularly the beginner. In order to help the teacher impart this information to the students I shall include a few suggested books on this subject: Science Service, 1719 N Street, N.W., Washington 6, D. C. From here you may obtain the following: Science Club of America; Thousands of Science Projects; Science Exhibits; and Scientific Instruments You Can Make. Also (2) Publication Sales Section, National Educational Association, 1201 16 Street, N. W., Washington 6, D. C., for Vistas in Sciences; You Want to Do A Science Project; and Encouraging Future Scientists.

In this age of stainless steel, TWA Constellations, Shooting Star jet planes and Shepard's solo flight in the Capsule Mercury, we may be inclined perhaps to measure the results of our progress in the scientific field with a yardstick and certainly not wise would this be for the amateur. It is our duty to encourage the beginner.

Science projects exist in such rich variety that it is possible to appeal to all the many children who like to work with tools enjoy making models. Others may enjoy drawing and will be capable of producing posters, charts, and friezes. Some students like to collect shells for example and will delight in preparing an exhibit on shells from the seashore. The summer time can be turned into a very profitable time.

Science projects such as these encourage pupils to plan, to use ingenuity, to persist at a job until it is completed. Group projects give children opportunities to work together, to share, to assume leadership. The final products are tangible evidence of accomplishment and give the children deep satisfaction.

"Did you know there are so many leaves?" This is fun! Is it an oak or a maple? Just ask Beatrice or Jane at Queen of Peace School, North Arlington, N. J.

By SISTER AGNES VIRGINIA, C.S.J.

Fifth Grade Science Fair

Dear Sister,

I realize that with forty in class, you could not assign an individual science project to each one from the grade work. But Diane came home so unhappy yesterday because she was not chosen to demonstrate a scientific principle, that we wondered if you would not let her work out one with her father. We would help her assemble the necessary equipment and let her practise on us. . . .

IT WAS LETTERS LIKE THIS one that made the science fair grow from a small class project that was to serve merely as a clincher of what had been taught and observed, to a project that attracted the interest of the whole community by its almost startling revelation of what little girls in the fifth grade can learn in science.

Not End in Itself

The fair was not an end in itself as many projects might well be—projects that increase the store of knowledge or power of obtaining it, since one of the aims of good teaching is to teach people to teach themselves. It was rather part of Sister's plan for permanent learning of the things she had taught during the year.

Educators are constantly asking themselves: "What makes learning effective? What makes some ideas stick, while others drop away?"

Going back to analyze our own learning, we find that certain techniques were more effective than others at different age levels. Children of ten and eleven like to do and make things; but too much learning that went into the process, failed to become "incorporated." It is the teacher's function to exert pressures that will incorporate these new experiences. All incorporation cannot be effected by drilling and Sister was at a loss to go about reviewing the multiple experiences of her science lessons. Many of the children's ideas were so hazy: as often happens, they would remember the pretty color of a liquid without recalling the object of the experiment.

"A newly acquired fact," Whitehead reminds us, "is no longer a bare fact . . . . It is emerging as the poet of our dreams and as the architect of our purposes."[1]

But new learning may wither away or atrophy for lack of use and we forget when new learning does not seem important to us. The hope that they too might have a science fair, "like they had last year," has made science important to this year's pupils. They are more interested in their science classes. One little girl who became interested in rocks, borrowed books on that subject from all available sources and we were not too surprised when she came in one day, with her own home-made plaster model of a volcano, complete with the rocks it had spewn. (See picture.)

No Mere Verbalism Here

We might say that the science fair was held to decrease the amount forgotten and increase the permanency of material learned. The type of memorizing that the pupils did to describe the experiments to visitors, is quite different from that blind, mechanical memorizing of material not truly understood. There was no danger of mere verbalism here because the memorized material was meaningful. There was also an association of words used with life outside the classroom, because nearly every one of the exhibits grew out of an experiment in the classroom or a field trip.

Take the matter of weather study. After a visit to the weather tower in Central Park where they heard the explanation of how weather is foretold and saw the instruments that measure rain and snow, they listened with renewed interest to the weather report on television. After hearing it, they would look at the special weather vane outside their window which also measured the rain and compare findings. I wonder if the weather bureau realizes it had a fifth grade class checking its reports?

The matter of experiments not performed in the classroom at their special "Science Table," was covered by carefully planned field trips to industry as well as museums and parks. Reading, free and supervised, formed not a little part in helping pupils know what to look for. It also provided background for what they saw on their trips.

[1] Alfred North Whitehead, *The Aims of Education*, Macmillan, 1929, p. 97.

Sister Agnes Virginia teaches in Brentwood College, Brentwood, N. Y., in addition to teaching French on the elementary level and Spanish on the high school level at St. Joseph Academy. She is also director of audio-visual. She herein writes of the work done by the fifth grade at St. Joseph Academy. Sister has been teaching French and Spanish for over twenty-five years in secondary schools of the Diocese of Brooklyn. For eight years she had charge of horseback riding at St. Joseph Academy.

Field Trip Fills Need

The field trip fulfills the necessity of direct, purposeful participation for learning. It links school with life, about which we must often learn vicariously and whose experiences must often be rearranged to make them easier to teach. It is most important in the teaching of elementary science, where the teacher is more often than not, unspecialized. The potentialities of the field trip are unlimited. It can fulfill the definition of true education as a power which makes the child an individual of discernment. It awakens curiosities—a motivation that helps in the follow-through process—and makes meaningful concepts out of what were formerly just words. The encouragement to talk about their experiences, enriches their English as well as their science.

Sister forestalled the actions of the boy who, when asked why he "got sick" every time the class was to go on a field trip, said, "If I go, I'll have to write a composition about it tomorrow." The children took turns going down in groups to report to the friendly principal the day after the trip. All were generous with suggestions as to what each should say, so as to cover the day completely, so that all would not be telling the same thing, or one telling everything while the others remained silent. While they were never asked to write the redoubtable composition, they were encouraged to tell their experiences in a letter. Indeed the boarders were particularly glad to have something to say in their weekly letter! These tactics tended to crystallize the purpose and findings of the trip which Sister had discussed before they went.

Prolific Source of Information

The Brooklyn Museum was a most prolific source of information. Not only were the lecturers professionals in their respective fields but their talks were carefully geared to the age of their audience. Lessons on fossils and rocks (on request) took one day's excursion. On another day a complete unit on magnetism with its corollary on energy and electrical power, supplemented the teacher's knowledge of those highly specialized fields.

Nor were opportunities offered by industry and other agencies neglected. Edison's Laboratory in New Jersey showed not only scenes in the great inventor's life and work, but also how his work is still being carried on in research behind the scenes. Their mixing of chemicals in the laboratory introduced the children to electro-chemistry.

Even the visit to Roosevelt's home, which was a history project, highlighted that man's interest in animals and made everyone more actively participate in the lecture and movie offered at a later date by the A.S.P.C.A., which opened up hitherto unknown vistas of the animal world.

NBC at Rockefeller Center explained the mysteries of television, and the Planetarium featured the *star* seen by the shepherds on that first Christmas night.

A volcano model is made for the project study of rocks and minerals. Attractive books encourage interest of these pupils of grade five at St. Joseph's Academy, Brentwood, L. I., N. Y.

If Ruskin was right when he said: "Hundreds of people can talk for one who can think but thousands can think for one who can see," the visit to the Bayard Cutting Arboretum, south of East Islip, L. I., was invaluable. A bird sanctuary, a duck farm and, best of all, labelled trees, flowers, and shrubs sharpened the eyes as few things can.

Films and Filmstrips with Each Field Trip

Before or after every field trip was shown a film—or filmstrip—dealing with the same subject matter. Ford Motors, Shell Oil, and Bell Telephone, to mention only a few, have excellent free films on many scientific subjects. Sister also explored the programs offered on television and showed some during the day in the classroom.

The field trip, more than anything else, furnished the all-powerful motivation for learning; it was pleasurable. And while a field trip is not a lark or a picnic, but rather a classroom temporarily transported to a new locale, it can be made pleasurable. They had "lunch out," for one thing. The people in places visited showed a friendly interest in their young "inspectors," as one guide called them. Where time permitted there was an hour of ice-skating, not usually possible at home. Thus was recognized the truth that learning is emotional as well as intellectual.

Many places gave evidence of their realization of the truth that when children can perform themselves, the demonstrations are more effective. For instance, on one excursion to the museum, they were permitted, after a lecture by a specialist in the subject, to push buttons on a panel, causing to light up all the places where the selected mineral was produced. Thus facts

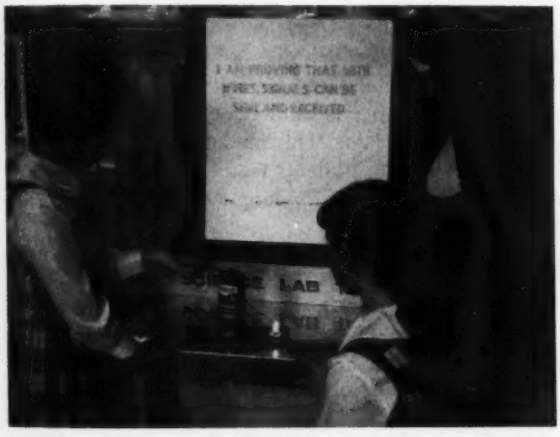
as difficult of demonstration as rock formation, are shared by the learner when he can participate if only by pressing a button that answers his questions.

Sister takes the class on these outings once a month. She plans them before the school year opens and has all necessary licenses and parental permissions well ahead of the scheduled visit. The permission forms are mimeographed and all pertinent data for each trip is filled in before they are signed by the parents.

The Fair a Post-Teaching Activity

All we have said thus far is to show that the fair is a post-teaching activity rather than teaching being the post-fair activity, as it were. The motivation furnished by the fair was to *clinch* or establish permanency in learning by capitalizing on what comes naturally—the desire to put on a show, which is all but inherent in the heart of man.

"I am proving that with wires, signals can be sent and received," is how one fifth grader labelled her science fair exhibit. She is shown demonstrating for fellow pupil as science coordinator from Brentwood College, Sister Anthilia looks on.



The charts and simple models that they made—like two paper cups where connecting string was the sound conductor—were only visual symbols for summarizing principles already learned, tested, and applied.

A science fair is only one evidence that the content of science instruction is undergoing a rather thorough reorganization in an effort to develop a more functional understanding of facts, principles, concepts, and growth in the use of the scientific method and attitude. It is one more evidence of its vast social implications which offer the teacher as a guide and motivator of learning experience rather than a lesson hearer.

Let us see now how these experiences were crystallized into words, ideas, principles, and rules: how the children generalized from experience.

Every research and experience of the year did not lend itself to a demonstration for some reason or other. None wanted to deal with fossils although one of their field trips was concerned with them and they had had both a filmstrip and movie dealing with different aspects of them. Also the children had been rather diligent in their search for evidences of fossils in plant life and some had brought in to class interesting specimens they had found. (Sister did not miss the occasion to point out that by constant association with others, we too leave our imprint, good or bad, upon them.)

Pupils Had Favorite Topics

So it was evident that these fifth graders had favorite experiments.

Like most fairs the focal point would be the booth; but unlike most, there would be no bargaining, buying, or selling—only demonstrating. Each one was to set up her own experiment, make her own chart, and prepare her explanation of what she was doing and trying to prove. To be sure that there would be no "scientific heresies," Sister had each one write out her experiment. Here is a typical account, complete with orthographical changes:

1. The Electric Bell.
2. I had a dry cell battery, a knife switch, and the bell. "Thease" things were attached to a "bord." The wire ran from one end of the dry cell to one end of the bell, and from one end of the bell to one end of the knife switch and from the other end of the knife switch to the other end of the dry cell battery.
3. I showed how the bell worked and what caused it to ring.

If possible there was to be a chart above the booth explaining what the demonstrator was proving. Charts might also contain other relevant information. Parents were allowed to help but not to take over. To insure poise and eliminate self-consciousness, each child memorized her description, starting with the purpose even though it was already stated on the chart. As they expected visitors to ask questions, each

(*Continued on page 267*)

This fifth grader at St. Joseph's Academy, Brentwood, L. I., N. Y., chose for her science fair demonstration: How to Tell an Acid.

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By REV. JOSEPH A. COYNE, O.S.A.

Projects—a Spur in High School Science

WE LEARN TO DO by doing. Almost all the great scientific discoveries came first from the laboratory. After that the theory was developed and the applications were refined. The project method does have a lot of merit in teaching science because it is a living experience.

If one visits Ireland the warmth of the Irish folks is experienced and felt. If one visits the shrine of Our Lady of Lourdes vivid examples of Faith in action will penetrate to one's soul. If one journeys to Nagasaki in Japan then the work of the Catholic missions becomes a reality.

Several Aspects to Project Approach

Teaching science, with the aid of the project method, is like travelling, it certainly broadens one's education. The project method of teaching science may be treated from the following aspects:

(1) Science laboratory experiments.
(2) Student lecture demonstrations.
(3) Seminar.
(4) Research project.
(5) Field trip or scientific expedition.
(6) Science Fair.

(1) Science laboratory experiments are an integral part of the science course both at the high school and college level. Since they are an established function and every one, i.e., the science teacher, is familiar with them then there is no need to discuss the matter any further. This aspect of teaching certainly has merit. Individuals may differ on details but from years of use it has proven its utility.

(2) Student lecture demonstrations were used during the past school year in general science and physics. The method was very successful in most instances; of course, one can't expect a hundred per cent cooperation. The science textbook will have a list of student activity. Each student is assigned one activity to be given in the form of a lecture demonstration. In fact, a schedule of assignments is drawn up for the entire class and posted.

One Student Expedites Lab Equipment

The lecture demonstration type requires the use of some lab equipment. Rather than have the teacher pestered with requests for test tubes, litmus paper, weights, etc. (then multiply that by thirty or forty) one reliable student in the class is assigned to the task of expediting all lab equipment. The system works with a minimum of supervision. The lecturer may use any audio-visual equipment in the department. It is interesting to note that at least 75% used the opaque projector, for charts, maps, diagrams, lists, passages from books, and even completed problems. Using the opaque projector eliminates much blackboard work.

After the formal presentation there is a question and answer period. Fifteen minutes was the usual time allotted to a student. However there were any number of occasions when one student was on the floor for more than a half hour. This method proved very successful because the students learned science and were experiencing the job of thinking and talking before an audience.

Project Sources

Following is a list of textbooks. The figure preceding the title is the number of projects found in each one. This is a random selection.

157 *Modern Physics.* Dull, Metcalfe & William, 1960, Holt & Co.
602 *Physics, the Story of Energy.* Brown & Schwachtgen, 1954, Heath & Co.
178 *Physics, Modern Approach.* Elliott & Wilcox, 1957, Macmillan Co.
113 *Modern Chemistry.* Dull, Metcalfe & William, 1958, Holt.
110 *Biological World.* Wideman & Gehlen, 1949, Loyola Press.
101 *Physics for our Time.* Merburger & Hoffman, 1955, McGraw-Hill.
132 *Biology, Inquiry Into Life.* Taschjian & Hubbard, 1960, Mentzer, Bush & Co.
33 *Basic General Chemistry in Outline Form.* Haenisch & Quan, 1953, Burgess Publishing Co.
320 *Physical Science for Progress.* Pella & Wood, 1959, Prentice-Hall.
700 *Science Experiments for Everyone.* Unesco, Doubleday.
173 *Science, Discovery and Progress.* Davis, Brunett & Gross, 1957, Holt & Co.

If anyone is interested in first class projects for the science class the following list of books has them.

The Amateur Scientist: Scientific American Book of Projects, 1960, Simon & Schuster.
The Saturday Science. Anchew Bluenle, 1960, E. P. Dutton & Co., Inc.
Great Experiments in Physics. Shamos, 1950, Holt.
Demonstration Experiments in Physics. Sutton, McGraw-Hill.

Father Coyne, well known to our readers as treasurer of the CAVE association, has taught physics for over a quarter of a century. For many years he taught at St. Rita's High School, Chicago. Father now teaches science and religion at Cascia Hall, Tulsa, Oklahoma, a preparatory school for boys. Part of the school day he spends in the office as student counsellor.

Then to complete this short reference list here are some monographs and periodicals.

Monographs:

Science Teaching Today. Project booklets. National Science Teachers' Association, Washington, D. C.
Thermoelectric Refrigerator. Buchanon, Refrigeration Service Engineers Society, Chicago.
Science at Work in General Motors, Detroit Michigan.
Physics and Petroleum. American Petroleum Institute, N. Y.

Periodicals:

Science World. Scholastic Magazine, Dayton, Ohio.
Current Science. Columbus 16, Ohio.

If you are interested in a student reaction to the lecture demonstration method then let Carl Schenk in the 9th grade at Cascia Hall tell of his work in the general science class.

Students Reports

During the year, I performed three experiments and gave one demonstration, accounts of which are listed below:

(1) Hydrogen Generator. Hydrogen was produced by a reaction between hydrochloric acid and zinc. The hydrogen was collected in bottles. Each bottle was tested with a burning splint to prove the presence of the hydrogen.
(2) Distilling Water. The first time a bunsen burner was used to evaporate the water. The water was condensed by passing it through a glass tube. The second time a laboratory apparatus was used.
(3) Voltage. Three batteries were connected in series, then in parallel, and the voltage of each connection tested by a voltage meter (laboratory owned). The series connection produced the highest voltage.
(4) Flooring. Each member in the group collected samples of a different type of flooring and looked up information on his particular type. Then a demonstration was given before the class. (This was a group experiment, three students.)

In my opinion experiments are very valuable to the student, at least they have been to me. They supplement book work, indeed in some cases go so far as to teach the student material not covered in the book. Without experiments, a student would not have a chance to express his creative ability in the field of science, nor would he have a chance to practice public speaking. Experiments are extremely useful in teaching a student how to do reference work.—CARL SCHENK, 9th Grade.

(3) The seminar is designed for the talented student only. It should be restricted to special occasions such as a term paper to be followed by a formal presentation and discussion. The school science club or the local Junior Academy of Science would be a fitting occasion for the presentation.

(4) The research is only for the gifted student. Both this and the preceding aspect could well be

A 10th grade pupil's completed project which won first place in the biological division at Cascia Hall, Tulsa, Oklahoma. The pupil chose an experiment in plant nutrition. The plants were fed ten different solutions starting the seventh day after germination.

treated under the same heading. But there is a difference between the two. The seminar is the preparation and discussion, in a formal manner, of some scientific topic. The research project would involve actual experimentation and the report on the research project could be called the seminar. Believe it or not research is reaching down to the high school level. Funds are available to the worthy and gifted student for research. The National Science Foundation has such programs in operation. The General Electric Company has set up a program for the high school student in research. Generally the top winners in the state and national science fairs come from this group of students.

The Field Trip

(5) The field trip or scientific expedition. This is the type of scientific project that is least painful on the part of the student as far as work output is concerned. At least that is the way it appears on the surface. In the larger cities, such as Chicago, Philadelphia, New York, Los Angeles, etc., there are some wonderful science museums. One's education would be neglected if the local museums were not visited. In order to avoid headaches for the teacher (organizing the group, discipline on the bus, order and attention in the museum) a visit to the museum should be given to the student as an assignment, it is extracurricular. In order to check up on the assigned visit a report is due, written by the student, on an assigned day. The teacher, of course, having visited the museum on a number of occasions will be able to judge the authenticity of the work. One must not expect one hundred per cent cooperation, even if students were herded into a bus some would probably escape the ordeal.

In cities and towns that do not have museums de-

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voted to science then there are a number of places where science is in action, such as public utilities (electric company, gas company, water distribution) and local manufacturing plants. Most of them are anxious to have student groups visit because it is good public relations.

The Science Fair

(6) The Science Fair has spread like wild fire. It is now in operation on the following levels: school, city and town, county, state, and national. Imitation is the best form of praise and the social science people are doing just that with their Freedom Fairs. Student projects for the science fair may be considered class work or extracurricular. The quality of the work should be reflected in the student grades.

Objectives of the science fair may be one of the following:

(1) demonstrate a scientific principle by means of a model, mockup, or some visual method.
(2) construct a teaching aid to demonstrate a scientific principle.
(3) a research project, i.e., find the answer to a problem.

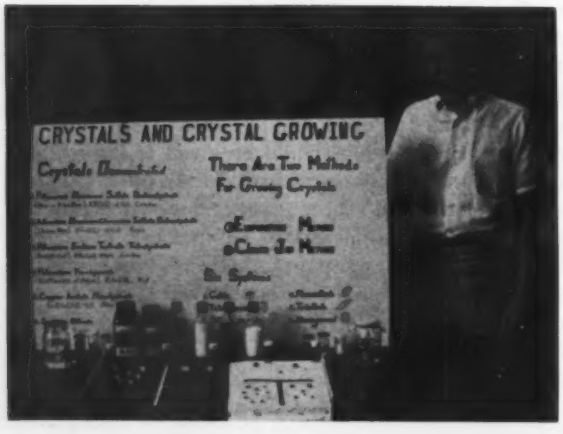
The science fair requires much planning, organizing, and plain hard work; a good bit of this can be done by the students.

How does one organize such a "fair?" There are some excellent guide books which may be obtained from the National Science Teachers Association and affiliated groups. Once a science teacher's name is on the mailing list there is no need to go looking; things will come. The professional journals on science will keep the teacher well informed.

Student Reactions to Fair Projects

The information on the following table (Table 1.) gives the student reactions on their science fair work.

A completed project on display at Cascia Hall, Tulsa, Oklahoma, showing crystals grown, and displaying the chemicals and methods used.



There were three classes; a 9th grade with 27 students, two 11th grade with 16 students each. Each student *had* to enter a project in the science fair. It was extra curricular work. References were provided, encouragement and threats were spoken but no help. The students were strictly on their own. Most were very reluctant when the ultimatum was given but from answers to question six they were glad that they were forced to do the project for the science fair. The quality of the work would follow any normal classroom curve: the excellent, the average and the bottom of the barrel. There was only one student, out of 57 possible entries, who did not come through with a project.

TABLE 1

Ninth and Eleventh Grade Students' Reactions

1. General Impression of the science fair projects.
   Good . . . 65% Fair . . . 22% Bad . . . 13%
2. Did you learn much from your projects?
   Considerably . . . 59% Moderately . . . 28% Little . . . 13%
3. Interest developed with reference to a hobby.
   Increased interest . . . 43% No increase . . . 57%
4. Interest developed with reference to science.
   Developed interest . . . 74% Did not . . . 26%
5. Consulted reference books other than textbooks.
   Consulted other books . . . 95% Did not . . . 5%
6. Enjoyed doing the project.
   Enjoyed doing it . . . 87% Did not . . . 13%
7. Was it a help in studies?
   Yes . . . 55% No . . . 45%
8. Was the project a waste of time?
   Yes . . . 10% No . . . 90%
9. Did you receive outside help?
   Had no help . . . 25% Had help . . . 75%
10. Cost of project to students.
    High . . . $40 Low . . . 35¢

Report on Project, A Sample

The following project on crystal growing won first place in the senior physical science division. It is very interesting work and very easy to learn to do. This experiment was performed not by one of the superior or talented students but by one of the average students. It required patience and consistent work.

CRYSTAL GROWING

In crystal growing there are two methods used: the evaporation method and the sealed jar method. In the sealed jar method the chemical is mixed with water to form a supersaturated solution. The chemical must be mixed to the exact proportion in order that the desired results may be obtained. Before the crystal is grown *seeds* must be grown. This is done by putting a string in the usual solution. On this string small crystals called seed crystals will grow. The seed crystal is tied on the end of a string and is placed in the solution, then the top of the jar is sealed. Since the solution is supersaturated the excess salt in the solution slowly crystallizes on the seed.

In the evaporation method the same procedure is followed for the mixing of the solution. Then the seed on the end of a string is tied to a colbra. The colbra is a wire that is completely submerged in the solution and is used as a support for the string

to be hung on. Then a cloth is tied to the top of the jar to prevent the entering of any unwanted particles and to make the water evaporate as slowly as possible. When the water evaporates the solution will become supersaturated and the excess salt will crystallize on the seed. This is the slowest way of growing crystals. After the crystal has grown to the desired size and shape it is best to place it in mineral oil to keep it from disintegrating.

Crystals which are growing in two solutions—at left using the slow evaporation method, and right, the sealed jar method.

Preparing my project for display took approxmately two months. I was not completely satisfied with the results obtained. After the project was displayed I continued to grow crystals. From doing this I discovered easier and better ways of growing crystals which also produced better looking crystals.

The science fair was an educational experience which helped me to become well acquainted with some of the basic fundamentals of chemistry and physical science. Besides obtaining knowledge from the project I acquired an interesting hobby. All in all I think that every minute was worth while and I suggest that everyone should experience the same.—JOSEPH KERNKE

Methods in Elementary Science

(*Continued from page 256*)

basic law. The outcome was summarized by one lad, who as he removed his earphones, said, "That's simple. The angle of incidence equals the angle of reflection." When this law is understood, it is simple but is so important that our government is planning to spend millions of dollars to develop a satellite system to reflect radio and TV waves around the world!

In Summary

Let me summarize! What is this, the end? No aims, no procedures? Yes, they are all there but each teacher must seek them for herself. I do not believe in a cookbook presentation, for children do not all react the same way. Each class is different as each child is different. Each teacher must prepare herself. Your question is your stimulus; your demonstrations, observations, calculations are your procedures; your concepts are your conclusions. The skills of observation, organization, research, and calculation will assist the mathematical and reading skills. Composition will be enriched. The habits of order, neatness, critical-mindedness, perseverance, and co-operation will assist each child to develop many Christian virtues.

The science period will probably be more informal but it will be most informative to the alert teacher. This period will offer an opportunity to study attitudes and habits of the child as well as to develop skills and knowledge.

Let me give one more reference. The Greatest Teacher, Christ, used the daily experiences of His people to teach His Gospel. Christ used the examples of nature for His parables. Christ instituted the Sacraments and gave to each an *outward* sign. Let us follow His example. Lead the child from the natural to the supernatural, from the creature to the Creator. Romano Guardini in his book, *The Life of Faith* says:

> Things which come from God, for the most part, come in the form of a beginning. God produces no ready-made events. He touches a living organism, releases a movement, sows a seed.

We, as teachers, must imitate. We must make a beginning; we must touch our children with love of His universe, release their energies to its understanding, and sow the seeds of wonderment about His Creation in their willing minds.

Fifth Grade Science Fair

(*Continued from page 263*)

little girl made sure she understood thoroughly what she was doing as well as common applications of the principles.

Wise Counsel

Next to the class teacher, the most important person in the project, was the coordinator who not only saw that materials were correctly assembled and descriptions accurate, but who wisely counseled the elimination of certain experiments that would have given a false scientific notion because of over-simplification. Thus in a filtering experiment which showed muddy water filtering better through sand than through other mediums, it would have been too complicated and muddy to deal with other kinds of water. The experiment, simply set up, was not scientifically accurate.

Sister's original idea was to review for *permanent*

(*Continued on page 310*)

Choosing a CATHOLIC COLLEGE Series

COLLEGE OF ST. TERESA

Kansas City, Missouri

The College of St. Teresa is a liberal arts college for women conducted by the Sisters of St. Joseph of Carondelet. The College has been a four-year college since 1940 and is the only woman's College in Kansas City.

LOCATION

The College is now located on twenty-two acres in the beautiful country club residential section of Kansas City, Missouri. Announcement of plans to relocate the college in the southern part of the city was made during the Fall of 1960. Property at 120th and Wornall consisting of forty-nine acres was purchased in April, 1961, and building will begin soon. The new College, including dormitory, will be ready for occupancy during the 1963–1964 school year.

ACCREDITATION AND AFFILIATION

The College is accredited by the North Central Association of Colleges and Secondary Schools. It is accredited by the Missouri State Department of Public Instruction for the Certification of Elementary and Secondary Teachers and by the Missouri State Board of Nursing. The College holds membership in the Association of American Colleges, American Conference of Academic Deans, Liberal Arts Study Group, N.C.A., the American Council on Education, the National Catholic Educational Association, the American Association of Colleges for Teacher Education, the American Association of Collegiate Registrars and Admissions Officers, and the Missouri College Union, American Alumnae Council.

COLLEGE OBJECTIVES

The fundamental aim of the College is to form Catholic scholars. To accomplish this aim, the College provides her students with the means of acquiring a liberal education, an education which develops within the student understanding of the realms of knowledge and the interrelationship of reality. By study of the liberal arts and sciences, the student is guided to develop her individual powers and gifts of intellect so that she may gain that wisdom, freedom of intellect, and spiritual assurance which is the mark of a truly educated woman. From this liberal education, the student derives abilities for scholarship and research, professional competence, and community leadership.

FACULTY

The faculty is composed of Sisters of St. Joseph of Carondelet, priests, and lay men and women. The student-teacher ratio is twelve to one.

LIBRARY

The library contains 36,975 volumes and receives 250 periodicals, including professional and scientific journals. New college facilities will permit growth of the library to 100,000 volumes.

DEGREES

Degrees of Bachelor of Arts and Bachelor of Science in Nursing are awarded by the College. Students may major in philosophy, mathematics, biology, chemistry, history, English, speech and dramatics art, modern languages, music, art, education, home economics, business administration, physical education, and medical record library science.

CURRICULUM DIVISIONS

1. Division of Theology
2. Division of Theoretical Science
3. Division of Practical Science
4. Division of Liberal Arts
5. Division of Applied and Professional Arts

CO-CURRICULUM AND EXTRA-CURRICULUM

Student Personnel Services: On her admission to the College each student is assigned to a counselor. Upperclassmen may consult the director of their major department during the period of pre-registration each semester. In addition to conferences with their counselors, students are urged to consult freely with the Dean or any member of the faculty. A Director of Counseling is a faculty member and guides students in occupational selections.

Student Societies and Clubs: Student Government Association, National Federation of Catholic College Students, Sigma Chi Iota (Science Club), SNEA (Student Teachers' Association), Sodality, Mission Club, CCD (Confraternity of Christian Doctrine), Student Nurses Club, Home Economics Club, Spanish Club, French Club (also Honor Society), Music Club, Literary Club, Drama Club (also Honor Society).

Student Publications: The Teresian, the college newspaper, *The Golden Echo,* the literary journal, and an annual senior booklet.

ADMISSION REQUIREMENTS

Freshmen entering the college must meet the following requirements: (1) Graduation from an accredited high school. Students with high credentials from non-accredited high schools will be given individual consideration; (2) unqualified recommendation for college from the high school principal; (3) an acceptable certificate of health from a reputable physician; (4) fifteen acceptable units of high school work as follows: English, 3–4 units; mathematics, 2–3 units; foreign language, 2–3 units; history, 2–3 units; science, 1–3 units; and (5) satisfactory performance on a nationally recognized college entrance examination.

Students applying for advanced standing must submit the following: (1) official high school transcript and official transcript of all college credit; (2) Statement of honorable dismissal from the dean or registrar of the college previously attended.

EXPENSES

Tuition, per semester	$200
General fees, per semester	$30

SCHOLARSHIPS

Five competitive scholarships are awarded annually, three for study in any field; one in music and one in nursing.

ILLUSTRATIONS

Opposite page, top: The statue of St. Joseph frames entrance to the campus; expression of artistic talent is encouraged in a still-life class, one of many art classes offered; Teresians take time out under the big oaks on an Indian summer afternoon.

Opposite page, bottom: Cast members of "The Chocolate Soldier" pose between scenes—annual musical production; chorus members practice before fulfilling a singing engagement in downtown Kansas City; picnics at the barbeque pit—always on the menu for the Fall and Spring holidays.

This page, top: The reward of Mission Club work is provided by the understanding of young pupils; proud and happy student nurses, sophomores at the College, pose in uniform for first time after the capping ceremony; city hospital facilities are available to medical technologists, dieticians, and nurses to increase learning opportunities.

This page, bottom: Teresians are active in tennis, bowling, and hockey; a pretty Teresian and her date leave Donnelly Hall after an evening concert; orientation days include a Big Sister buffet for Little Sisters, the incoming freshmen.

UMI

By JOHN T. STRATTON

Should Parents Be Allowed

YES

WHY NOT? Who can be considered to be more entitled to this information than the parents of the children? If this information is considered as very important to the teacher in working with the children, how much more important this information must be for the parent who has to do the "long range" planning for the child, and not just work with the child for a year or two?

A generation ago this provocative question would not have been considered worthy of discussion. A strong and very definite "No" would have been the unanimous answer, and probably with very little deliberation over the decision. However, we find that education has wrought many changes. One of the changes that I feel has taken place in America is a "readiness" on the part of parents to receive information about the results of the many and various tests that their children have had administered to them periodically throughout the course of their formative years in our many and varied educational institutions. Before the child even enrolls in school, until he completes his formal education (including doctoral studies), he is tested, tested, and tested again. Many have asked the question, "Tested for *what*?" Maybe the more important question has not been asked, and that is, "Tested for *whom*?"

The last question probably overlaps the field of educational philosophy, but I feel that it is in this area that a justification for my stand on this issue may be based. Who has the prime responsibility for the education of our children? I hope that we are all safely in agreement with the answer, "the parents." Does the school help the parent in the fulfillment of this obligation, or is the parent permitted to assist the school with the education of their children?

Too Much for Too Many

Some critics of our present-day educational policies claim that the schools are attempting to do too much for too many. They feel that the schools have reached far beyond the scope of the traditional "three R's" and, in addition to essential academic training, are striving to offer total preparation in all of the desirable adjuncts of education in order that they may provide complete and total education of the individual. The supplements include, grooming, etiquette, swimming, driving courses, etc. Desirable as these may be, must the parents be supplanted in these areas of training? Defenders of this educational approach claim that they have been "forced" to supplement traditional courses with these so-called "frills" because of either the inability, or the lack of desire, on the part of parents to provide training in these areas for their children.

Delegated or Ceded Their Rights?

What does the parent have to say about this? Parents have the prime responsibility for the training and education of their children. Have they delegated or ceded this right to the schools? Can they? They cannot and they should not attempt to entrust this obligation and responsibility to anyone else. I feel that our schools have been doing a fine job in the education of American children. However, no matter how superior the school system may be, how excellent the school's curriculum, or how competent the teachers, schools cannot and must not attempt to ignore the role of the parent in the education of the child. Parents want to plan for the future of their children. The typical American parent wants his child to achieve a higher status than he, the parent, has been able to attain. Parents tend to seek all of the world's best for their children. The more that they know about their child, the better their planning for the child's future will be.

Why should the schools attempt to determine the future of the child without taking into consideration the parent's plans, hopes, and ambitions for the child? Parents may be striving to aid the child in the attainment of a particular vocational objective, only to discover that "the school" has decided that the child should be placed in a curriculum that is not in accord with this family planning. Communication between school and parent is obviously needed in such a situation. If our schools, particularly through test results available on the basis of school testing programs, possess information that could assist the parents in planning for the future of the child, I feel that the parent should be given this information. I will go a step further and state that I believe that he is entitled to it!

(*Continued on page 273*)

John Thomas Stratton is professor of educational psychology and director of testing bureau at Duquesne University where he has been on the faculty since 1949. He has a Pennsylvania certification as guidance counselor, and has been public school psychologist and speech correctionist. He is a member of several professional associations, and is active in parish CCD work. He serves as testing and guidance consultant to area high schools and schools of nursing and also a personnel consultant to local business organizations. A graduate of Duquesne University, he pursued graduate studies in guidance, psychology and speech correction at the University of Pittsburgh.

Patrick V. Quinn, M.S.

To Inspect School Records?

NO

SCHOOL RECORD KEEPING is a jungle of diversity. There is a lack of uniformity in types of records kept, storage of records, responsibility for records, provisions as to who has access to records, etc. In brief, it is a mess. Into this scene of disorder comes Commissioner Allen (New York State Commissioner of Education) with his decision to allow parents to inspect school records. Instead of a careful, planned evaluation of the whole record-keeping scene we have a hasty, politically expedient decision concerning one small aspect of the problem area. Worse than that, is the fact that this decision can only compound the problems. Our examination of the problem will show that the decision leads to dangers for the students, for individual school personnel, and for teaching in general.

Dangers to Students

Few will disagree that a basic assumption in connection with records is that those who have access to them will be familiar with the language and other symbols employed. A significant part of a teacher's preparation is devoted to insuring his familiarity with the words and terms employed to denote educational concepts. The familiar concept of the IQ can be used as an example. Roughly speaking, it is an estimate of a person's intelligence,* as defined by a particular test. Varying degrees of accuracy are implied depending on the validity and reliability of a particular test. Furthermore, test makers concede a considerable margin of error. Such factors as test sophistication, luck, anxiety, lack of motivation, fatigue, illness, etc.—well documented in the literature—can cause an under or overestimation of a person's true intellectual ability. When one is also aware that among test experts there is disagreement as to what is actually being measured by an IQ test we can see further need for caution in interpretation. Perhaps, an example will help to illustrate just one of the dangers involved. A parent inspecting the records of his two children notes an IQ score of 102 for Mary and a 97 for Susie and concludes that the first is significantly better than the second. Yet the standard error of the test may be five points. That is, if the test were repeated we might expect a subject's IQ to stay, in two out of three cases, within five points of the first score obtained. The score of Susie, for example, on a retest might range anywhere from 92 to 102. What is even worse is that in one out of three times the score might exceed these limits.

Difficulties Involved in Interpretation

Of course, it might be objected that the commissioner's ruling advised interpretation of scores by school personnel. There are two formidable objections to this. First, when one considers only the large diversity of test scores reported in the modern school's records—many employing varied statistical concepts such as mean, standard deviation, percentile, stanine, etc.—one can begin to appreciate the difficulties involved. A simple five minute briefing will not be sufficient to guarantee a parent's real understanding. Furthermore, even if there were unlimited time it must be remembered that understanding something such as a standard deviation and being able to convey its meaning are not quite the same. Many a teacher can vouch for this, perhaps especially those teaching statistics. Secondly, psychologists have found that when a specific score such as an IQ is observed or quoted, that the number tends to remain in the minds of the parents and the qualifying phrases such as "this is possibly an underestimation" tend to be forgotten. Obviously the naive faith in the exactness of test scores coupled with the tendency to make what are often odious comparisons can be a major source of difficulty to many developing personalities. Expectations for children can be unrealistically raised or lowered by parental misunderstanding of test data. *Approximation and qualified opinion under the guise of exactness and fact, can lead to dire consequences.*

Commissioner Allen's call for "planning of pupil record information which will be useful to school personnel and understandable to pupils and parents,"[1] is a contradiction in terms. The logical outcome of this advice would be a tremendous increase in the amount

(*Continued on next page*)

* Many test experts would call it a test of scholastic aptitude. Some would even go further and insist that because of the unknowns involved it might better be called a test of factor "X."

Mr. Quinn is assistant professor of psychology at St. John's University, Jamaica, N.Y. He taught English in New York City junior high schools for two years and for three years was instructor in psychology at St. John's. A member of Phi Delta Kappa and Kappa Delta Pi, he is a graduate of St. John's University, with M.S. in psychology, and is working for his doctorate in educational psychology at Columbia University.

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Parents Inspect School Records? No

(*Continued from preceding page*)

of clerical work for all school personnel involved. This additional increase on top of an already onerous burden would make for an intolerable clerical situation. Not only would teachers have to give, score, and record the outcome of the many standardized tests now given, but they would have to add to the scores sufficient qualifying phrases so that it could supposedly be understood by the majority of parents. Of course, even all this might be for naught if, as it is feared, the parent only remembers the score itself.

Dangers to Individual School Personnel

The making available of student records to parents exposes school personnel to retaliatory attacks by irate, less objective parents. Many parents will react to adverse reports, scores, or comments about their children as personal attacks upon themselves. If negative comments concerning their children will provoke an angry outburst on the part of parents then consider the possible reaction of a parent to a comment by, for example, the school psychologist that "perhaps the authoritarian structure of the home is contributing to the negativism of the child." Or consider the form a mother's defensiveness might take after observing a comment by the school psychiatrist that, "Mother appears to be cold and indifferent to the child's needs." Two of the many possible outcomes of parental acquisition of school records of such a nature could certainly be suit for libel against the person making the report or a demand for his dismissal. Influential members of the community have had school personnel fired for less.

Sixth graders at St. Patrick's Academy, Sidney, Nebraska, under the direction of Sister Gerald, O.S.U., are reading essays telling of the responsibility and duties of the president.

The reaction to such potential threats would undoubtedly be an omission of anything of a derogatory nature from school records. Only that which can be empirically demonstrated or is of a strictly factual nature would be recorded. Anyone familiar with the current state of evaluation and measurement can realize the paucity of information that would result. Needless to say, many valuable insights are gained only by a feeling of freedom to air subjective viewpoints. To admit to the records only data that can be objectively verified would result in a wealth of potentially valuable insights being omitted. This is not to say that those charged with making notations on school records should not clearly distinguish between what is fact and what is opinion. School personnel clearly have an obligation to safeguard and take every necessary precaution to distinguish subjective from objective material. Many schools undoubtedly need a re-evaluation of their record keeping in regard to what should be included and how it should be reported. The public has a right to expect the utmost diligence and uniformity within the school system in so vital a matter as record keeping.

Danger to Teaching "Profession"

Teachers like to allow themselves the luxury of the fiction that they have professional status. Many, perhaps, even can muster a good defense of this position. Those unaware of Myron Lieberman's comprehensive and provocative coverage of this topic in his *Education as a Profession* may be able to sit back and contentedly contemplate their professional state. However, the decision to hand over school records to parents for perusal must have caused even some of this latter group to stir a little uneasily. To maintain professional dignity in the face of such an affront denotes a clear desire to maintain equilibrium through any means even to distorting reality. The question as to whether or not teaching is a profession will not be clearly decided by a reversal of the present ruling—there are many other factors to be considered—but if the ruling is allowed to stand, then any semblance of the notion that teaching is a profession must be discarded. Why? Consider the following. One of the primary indicators of a profession is the extent to which the group is recognized as having a body of knowledge and skills which is not shared by other groups. The present ruling implies that anyone is competent and expert enough to understand educational records. What then sets the teacher apart from the layman? Can anyone still believe that we possess something special if the most ignorant parent is our peer in this regard? Just consider the fact that medicine, nursing, psychiatry, law, and all the other recognized professions feel no need to hand over their records to their patients or clients. How can teaching claim professional status alongside these groups that have the right to interpret their records for the layman? The picture of any of these groups having to justify their records to a layman (unless armed with a court order) is inconceivable. The shortage of teachers is clearly critical and steadily worsening. How can we expect to attract competent young people to a "profession" that has no autonomy, that is at the mercy of any influential group or individual, that must answer and defend its records

to even the most incompetent individual in a society as long as he has the title of "parent"? This decision which may appear innocent on the surface has in reality ruinous consequences for the teaching fraternity.

In summation, the essence of this problem is a need for two-way communication between the home and the school. A folder full of statistics and educational language in the hands of parents does not constitute communication. The school and the home are in partnership for the welfare of the child and neither will benefit by a surrender of one to the other.

[1] *New York State University Bulletin to the Schools*, Feb. 1961.

Parents Inspect School Records? Yes

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I believe that the parent is entitled to information secured as a result of any testing on at least "moral grounds," and possibly on "legal grounds."

Interpreting Test Results

I feel that the decision to inform parents of the results of testing involves an additional aspect of education—education of the parents (and also the education of many of our teachers) as to just what these test scores mean or imply. Just what do the test scores indicate about a given child and just how much confidence may be placed upon the results of a given test are important aspects that must be known and understood by the teacher or counselor before he or she can make a meaningful interpretation of test results for a parent. A teacher must know something about the contents of an examination (what the test is measuring), and must also know something about the available normative data (with what group is the child's score being compared), and must also know something about the validity and reliability of the test. This is basic and essential before the teacher can fully utilize the results of the test in her own work, and this is imperative before the teacher attempts to discuss test scores with a parent.

Test Must Differentiate

I feel that test results can be meaningful for parents as well as teachers if we attempt to remove the shrouds of secrecy and mystery with which we have been inclined to veil our tests. Let's remove tests from their somewhat shaky pedestal. Let's accept the fact that tests are not infallible either as measuring instruments or as predictors of future success or failure. To be a good test, a test must differentiate. It must indicate in what manner Johnny is different from other children of his age or grade. A test may also indicate differences that lie within Johnny: he excels in arithmetic, but is poor in spelling or reading. This function of differentiation is crucial to testing. We want to know something more about Johnny, and testing should help us to arrive at some conclusions. Tests, however, cannot present a total picture of Johnny's abilities, personality, interests, achievement, and aptitudes because tests are not in themselves complete and total measuring devices. Tests, as is always stressed in basic courses in psychology and measurement, are only a *sample* of Johnny's reaction at a given time to a *sample* of questions in a given area. This should be made clear to parents. Tests should always be used along with all other available information, and not as an end in themselves. All too often, however, people tend to overlook the fact that the results of a given test indicate merely this sampling of Johnny's responses or behavior in a given situation.

I feel that once it has become acceptable practice to share test results with the parents, we shall discover that we are getting the most out of our testing programs. It is regrettable to say this, but I feel that all too frequently tests are administered to groups of children and no one knows exactly why. Tests are purchased, administered, and scored and then we enter a psychometric void. In many instances, even the teachers never learn the results of the testing program. Results of a testing program most certainly prove of value to the teacher who is working with the children daily. If the teacher gains a broader knowledge and insight and understanding of his pupils as a result of tests, why shouldn't this increased understanding be shared with the parents?

How Best Pass on Information to Parents

I feel that the real problem is not, "should the parents know the test results?" but rather, "how can we in education best pass on this type of information to the parents?" We shall have to be realistic and appreciate the simple fact that every parent cannot receive this information in any stereotyped manner. This cannot become a process as simple as inserting a coin in one of our modern automatic vending machines. I feel that the dissemination of test results to parents should be, if at all feasible, carried out on an individual, personalized basis rather than by means of group discussions. Possibly, an explanatory letter to the parents that would inform them about the purposes of the tests or a talk by the school counselor or a teacher at a parent meeting, prior to the discussion of test results with individual parents, would establish a basis for a favorable and a mutually satisfying meeting of parent and teacher to discuss the test results. The more common and general questions that might be anticipated could be covered by either of these approaches, thus leaving more time for an effective discussion of a particular child's test results with the parent or parents. This child-centered approach to test interpretation should prove most beneficial to both school and parent. As both share their knowledge of Johnny, both will learn how best to work with Johnny for *his* benefit.

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By SISTER M. FRANCIS ASSISI, C.S.A., Ph.D.

Reading Needs of the Christian Child

TWENTY YEARS AGO in a third-grade classroom of a parochial school in a small mid-western city, a pug-nosed little boy waved his hand frantically at the close of a health lesson. Larry usually showed a minimum of interest in the orange-covered textbook which likened the body to a machine and stressed the need for cleanliness, regularity, good nutrition, and rest. While I was eager to get on with the arithmetic lesson and regretted the delay that would ensue, I could not resist discovering what Larry's contribution might be. "Sister," he blurted out at my nod, "the guys that wrote this book, they ain't said one word about how God made us yet."

Fifty-three small heads turned to look at Larry, then at me.

For a moment I was nonplussed, to say the least. Then I tried to explain that the book was about health and that the author wanted to tell boys and girls about the way the body worked and how to take care of it.

"Yeah, I know that, Sister," Larry was unimpressed by my explanation, "but look, in catechism you tell us we're God's kids. (I hadn't put it exactly in those terms!) And we're holy and that we gotta treat each other nice and not kick and hit because our bodies are the temple of God. I think the guys that made the book oughta say so."

"I think they should, Larry," I agreed.

That night I examined the textbooks and reading materials in my classroom. The catechism was just questions and answers, but it did present essential and satisfying truth. The reader had a happy sprinkling of stories with religious content, but that was it. These children were eager for materials that would present the world of time and space in its supernatural meanings! The reading need that Larry expressed so inelegantly but intelligently that day has challenged me ever since. I never pick up a child's textbook, reference, library book, or periodical without examining it for its supernatural orientation.

Sister Francis Assisi is director of teacher education at Marian College, Fond du Lac, Wis. She has contributed weekly letters to the Grade 3 edition of *Our Little Messenger*, a classroom publication issued by Geo. A. Pflaum, Publisher, Inc. An experienced grade teacher, Sister received her doctorate in philosophy from Catholic University of America where she has taught two summer sessions and has been co-director of a seminar in language teaching arts. She is author of *Bong Bong Princess*, and of two serial stories that have appeared in *Our Little Messenger*.

1. Informational Reading with Supernatural Orientation

Children have a tremendous preoccupation with the ultimate. (Ponder the nearly infinite series of "Why?'s," the tons of clocks and mechanical toys that have been dismembered to discover what makes them go.) There seems little doubt that they need reading materials which will provide them with information on a variety of subjects and which will orient this information to the supernatural. Happily, since Larry's outburst several excellent series of texts recognizing this need have been produced in science, history, geography, civics, and even spelling. Most of these texts, unfortunately, are restricted to use in parochial schools. Unfortunately, too, these informational books with supernatural orientation are restricted mainly to textbooks. One notable exception to this rule are the weekly periodicals for children published by Geo. A. Pflaum, Publisher, Inc. These periodicals for elementary school children feature regularly current topics in science and social studies within a Christian framework.

An abundance, indeed a veritable treasury of informational books on science, social studies, and the fine arts has been published for children during the past twenty years. The child in the middle and upper elementary grades accepts these books unquestioningly, unless he is aware that the author is proposing a distinctly naturalistic or materialistic explanation of reality. But, all too seldom is he aware of this bias and proceeds, this innocent, unwary, splendid child of God, to accept, to develop, and to live by a set of extremely naturalistic principles. This danger, and it is a dreadful, insidious danger, can only be counteracted by supplying the child with informational material oriented to God. The teacher is challenged to create and discover such materials, to use wisely and well those which do exist, and to keep alert to the need of evaluating critically a large portion of the materials commonly used by our elementary children.

2. Reading for Religious Knowledge, Inspiration

Rosemary, a nondescript-looking little first grader with wispy honey colored hair and enormous brown eyes, awakened me to another reading need of the Christian child. I walked into a first grade classroom one day several years ago to observe a lesson in primary work. The lesson had just begun when a little girl brushed past me and handed me a neatly folded sheet of primer paper. Such things may never be

ignored so I unfolded it at once. In neat bold manuscript I read: "I arose and am still with thee! Alleluia."

I blinked and gulped. Ordinarily, such communications read, "Up, up, go, up" or "See my red ball." I beckoned the child to come to me. "This is very lovely," I told Rosemary. "Do you know what it says?"

"Of course I do," Rosemary whispered indulgently. "It's from the Introit for the Mass for Easter. I just love it, so I copied it out of my Missal for you."

Now, Rosemary is a child of superior intelligence. They do exist, thank God, and their needs must be analyzed and supplied. These children, indeed all children, cannot be satisfied with the catechism alone. They need reading materials which will provide them with deeper religious knowledge, with religious inspiration, with edification, and with direction for devotion.

Children who partake of the Bread of Angels from their earliest years have a peculiar hunger for spiritual knowledge. They want and they need to know ever more about our Lord, His Church and the sacraments, the Blessed Mother and the saints. We have some excellent books in recent years on such subjects. The Petershams have designed and illustrated a series of lovely books in which they incorporate texts from the Sacred Scripture. *The Christ Child, The Story of Jesus, David, Moses, Ruth, Joseph and His Brothers* are relished by children everywhere. Marigold Hunt's, *A Life of Our Lord for Children* and *First Catholics* supply loved details of the Gospels and the Acts of the Apostles. Julie Bedier's *My Book About God* is perfect for pre-primary children. Bastin's *The Simple Story of the Blessed Virgin* is an exquisite work which deserves wide popularity. The Scriptural incidents related about our Lady became vivid with a stirring splendor and majesty. Pelagie Doane's *A Small Child's Bible* is worthy of mention here. And, the incredibly fine contribution of Daniel-Rops, the world renowned scholar, to the child's knowledge of Scripture cannot be properly evaluated. Certainly every child should be introduced to his *Book of Books* and *Book of Life*. They provide an excellent introduction to the reading of Sacred Scripture.

The weekly Gospel presentation of the Pflaum *Messenger* series deserves special mention here. The Christian child needs to know Christ as he needs no other knowledge! The Gospels are the perfect vehicle of this information about the Son of God. The *Young Catholic Messenger* a couple of years ago presented in addition to the weekly Scriptural passage, a delightful homily by the much loved Father Leo Trese. *Junior Catholic Messenger* has offered news notes alerting the children to the Scriptural message of the week. *Our Little Messenger,* two star edition, presented fifteen gospel selections in picture, drama, or story. The three star edition presented sixteen gospel selections, seven as dramatizations.

Doctrinal books for children are rare. The Catechetical Guild has several books for small children on Confession, Baptism, Mass and Holy Communion, and the Commandments. Much more material of this kind is needed. The catechism is an excellent treatise, but the child needs material for pondering and for growth in appreciation of the creed, of the commandments, of the divine worship. Here again the Pflaum periodicals offer a rich harvest for teachers, particularly in the area of materials concerning the liturgy. News notes, letters, and special features inform children about the liturgical feasts, their nature and significance. A particularly noteworthy feature of this material is the ease with which it can be introduced at home and produce a family consciousness of a liturgical event.

3. Reading for Religious Edification

The lives of the saints afford the child inspiration, edification, and often guidance in his religious growth. He needs to know about the men and women who have fought and won the blessed victory of eternal life. Mary Fabyan Windeatt, Eleanor Farjeon, Covelle Newcomb, Anna Kuhn, Joan Windham, and the Brothers of the Holy Cross have made hagiography for children a real delight. Our periodicals for children have contributed munificently in this area. The *Messenger* series two years ago carried a total of 81 articles on saints plus thirteen full-page illustrations in their first-grade edition. Yet, the children are not satiated. We have had verbal or neatly pencilled requests for stories about their saints from the country's Ernestines, Henriettas, Percivals, Ludmillas, and Alexandras. This interest in the Church Triumphant needs to be developed, certainly. Frank Sheed in a challenging little pamphlet entitled, *Are We Really Teaching Religion?* indicates that an earnest desire for heaven is one of the marks of the true Christian. Acquainting our children with the blessed throng of friends who rejoice in the Beatific Vision is one way of inducing this glad desire in minds and hearts still very much in love with earth.

4. Reading for Religious Guidance

Children have a most touching appreciation for religious guidance. I have received in one year twelve hundred unsolicited letters from seven, eight, and nine-year-old children from Florida to Manitoba, from California to Maine. These letters have been in response to Letters which have appeared weekly in the two and three-star editions of *Our Little Messenger.* The Letters have been informal, friendly efforts at guiding the children in Christian living. Over and over again, I have read precious little scrawls and labored epistles all sincerely grateful for having received help to love God more. Some of the little ones have even copied whole passages to show me what they liked best. The same response comes to the Father Jim letters in *Junior* and *Young Catholic Messengers.* The guidance value of advice columns in newspapers is often ridiculed. Yet, children and adults frequently feel the need for friendly, yet objective help. Books like Dr. Schindler's *How to Live 365 Days A Year,*

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Monsignor Magner's *Personality and Successful Living*, Bishop Sheen's *Peace of Soul* have become best sellers because people deeply appreciate objective psychological and moral guidance. Children, obviously, appreciate this kind of help, too. Indeed, Thomas Verner Moore employed bibliotherapy extensively in his work with emotionally disturbed children. A book, story, or essay which treats a problem objectively and sympathetically can be of real value for a child in his total growth to Christian perfection. It is this element, perhaps, which has made Father Brennan's books so popular with children.

5. Reading for Devotion

The prayer book has long been a common instrument for uniting the mind to God. The Christian child certainly needs reading material which will aid him in his communication with his Heavenly Father. Just as cultural reading improves our general ability in social communication, so manuals of prayer are efficacious in perfecting our conversation with the Most High God. For the Catholic child early introduction to the Missal is highly desirable. I know many bright second-graders who use a Missal intelligently and devoutly. While the world is much concerned and perturbed about the Johnny who can't read, a multitude of Christian Johnnies are saving pennies for missals!

The author talks with two young readers of her weekly letters to children which were appearing in the Grade 3 edition of Our Little Messenger.

There are several exquisite "prayer" books available for children that help to realize this pertinent need for devotional reading material. *Prayer for a Child* by Rachel Field, is a simple thank you prayer charmingly illustrated. It was awarded the Caldecott Medal in 1945. *The Lord's Prayer*, exquisitely illustrated by the d'Aulaires can stimulate magnificent meditations on the most perfect prayer we know. Tasha Tudor's *First Prayers* are very lovely. Ars Sacra has two tiny books, the *Our Father* and *Hail Mary*. The simplicity and other-worldliness of the pictures and meditation verses are truly remarkable. Prayer books for children need to be designed with special care. The quality of the child's communication with God will determine the depth and significance of his spiritual growth.

6. Reading for Aesthetic Enjoyment

A great deal of time is spent bewailing the fact that our children have such an atrocious lack of taste in art, music, and literature. An elderly Sister some weeks ago commented on the subject with all the wisdom of her long experience. "It's pointless," she said "to decry the fact that we have teen-age barbarians if we make so little effort to cultivate their finer sentiments in the elementary school. We spend energy and money to insure that they learn how to read but we show all too little concern in guiding them in what to read. "Take poetry," she went on, "How many children today really know poems? They can recite and sing dozens of the TV commercial jingles but we would blanch at the idea of asking them to memorize poetry."

That thought needs consideration. We all admit with Pius XI that Christian education is concerned with every aspect of human development. It follows that this includes the aesthetic. Beautiful pictures, exquisite music, and splendid poetry are certainly the heritage of the child. Why does the child need poetry, specifically? Poetry can perfect his imaginative vision. It can enrich his mental imagery, delight his memory, and provide him with unmistakable elegance in speech. The child needs poetry to read, to learn, to remember. The Christian child, like every child, needs jingles, verse, and poetry of every kind to delight his ear, his heart, and his mind. But he also needs the splendid poetry of the psalms, the chants, and the canticles. *With Harp and Lute* by Blanche Jennings Thompson and *A Lovely Gate Set Wide* are perfect anthologies of religious poetry of the highest quality. Sheed and Ward's *Gospel Rhymes* are especially attractive and offer children intimate scenes of the Gospels in a setting of breath-taking loveliness. *Poems of Praise* by Pelagie Doane and *Secrets* by Jessie Orton Jones have a lovely Christian quality. *The Faith and Freedom Readers* include a number of strong, majestic poems that are essentially religious in content and mood.

In the area of aesthetic enjoyment the child needs to hear as well as to see the poem. Most important, he needs to say it and to remember it. Time spent in reading and learning poetry has remarkably rich rewards. The liturgical participation so much desired by the Pope may be hastened if a little more time is expended on choral reading—an exercise which can well prepare children to pray together beautifully.

7. Reading for Recreation

The Christian child, I feel, has a peculiar need in the field of fiction. In the long ago days when I was a child, I can recall the exquisite satisfaction I experienced when I first found Father Finn and Mary T. Waggaman. Here were books with people like those I knew. Boys and girls went to Mass, received the Holy Eucharist, had petty problems about keeping the com-

mandments. Priests and Sisters appeared. It was a dear familiar world and it was a joy to find it in the world of story. There were characters one could identify oneself with in a fashion most satisfying and salutary. The courage, the charity, the wisdom story people portrayed in ordinary yet difficult and trying situations gave a new glow and meaning to our own personal behavior, a behavior that might have remained sterile and stereotyped and perhaps might even have been despised and discarded as we grew more sophisticated had we not seen the solemn beauty and virility of virtue in these Christian characters who were so very much like ourselves.

In the realm of fiction, there is still very much to be hoped for. A few grand books exist that should be available for every Catholic child: Hilda Von Stockum's *Cottage at Bantry Bay, Francie on the Run,* and *Pegeen.* Her *Kersti and St. Nicholas* is a rather startling commentary on Christian forgiveness; so much so that adults often misunderstand it while children grasp it with immediate understanding and sympathy. Clare Bishop's *Twenty and Ten* is an unusual story of Christian heroism and wisdom exhibited in a group of thirty refugee children. Alfred Noyes' *Secret of Pooduck Island* is one of those rare tales where qualities of people and their relationships are portrayed objectively through winning animal characters. It is Solo, the queer child, misunderstood and despised, who portrays for the children a character of unmistakable depth and beauty. A perceptive seventh-grade boy, after reading the story remarked feelingly, "I'm glad I met Solo of Pooduck Island! I'll never again be down on anybody who looks dumb!"

Sister Imelda Wallace's *Outlaws of Ravenhurst* is an exciting tale of young Scottish hereos whose devotion to the Blessed Sacrament is as deep as that of the Christian martyrs. The villains in the story are most villainous and detract somewhat from the majesty of the story. It is, however, an excellent book for portraying uncringing fidelity to Catholic truth.

. . . *and now Miguel* by Joseph Krumgold, awarded the Newbery Medal in 1954, illustrates forcibly the plight of the youngest in a family of New Mexican shepherds. Miguel's prayers, his earnest faith, are a source of real inspiration for children.

Leo Politi has made a fine contribution with his *Juanita* and *It Happened on Olvera Street.*

"Bumble Bim" and "Gramp of Goggin Castle," the serial stories in *Our Little Messengers,* have been designed with this nced of the Christian child in mind. Second graders have recognized in Bumble a boy "just like us." Gramp is a "loveful Catholic," a little girl declared. Rose Marie of the *Bong Bong Princess* (Bruce's Christian Child Series) is much loved because she finds her way to goodness through our Lord.

Discussion and Evaluation

One wishes that the list of books of this nature was inexhaustible. However, their paucity can be remedied by granting children more frequent opportunities to discuss and evaluate the many fine books they do read. This need to evaluate appreciatively and critically is a serious one for Christian children. Joe, a widely read sixth grader commented one day on William Pène Du Bois' *Twenty-One Balloons.* "Rollicking isn't it, Sister?" he said his eyes twinkling. "Such down-right materialism can be delightfully absurd." Joe enjoyed and appreciated the story, but he wasn't tainted by the philosophy.

After reading and enjoying a group of Greek myths, Susan, a sixth-grader remarked. "They are exciting stories, but I hope with all my heart, all those ancient Greek children are enjoying our Lord in heaven now."

A report by a fourth-grader on Marguerite De Angeli's *Thee, Hannah* initiated interest and discussion concerning the Quakers. Their opposition to the Sacraments saddened the children very much and they have decided to ask God to draw these good people to His Heart and grant them the joy of loving His precious sacramental gifts. The 1959 Newbery Award book, *The Witch of Blackbird Pond,* presents an interesting contrast between the Puritans and Quakers. The heroine of the story, an appealing young girl, is obviously indifferent about religion. Her attitude and the peculiar illogic of indifferentism need to be discussed and intelligently appraised by the Christian child. There is little doubt that Kit's indifferentism would be more concrete and meaningful than an abstract definition.

8. Reading Periodical Literature

Finally, the Christian child has a serious and abiding need to cultivate the habit of intelligent reading of periodicals. I have already indicated the valuable contribution children's periodicals can make in realizing a variety of the Christian child's reading needs. I was much interested to find a listing of periodicals used widely by American children in the May 1959 issue of *Elementary English.* Of the forty or forty-one periodicals listed, at least twenty-six are published by religious bodies. Eleven or twelve are by Catholic publishers, one by Jewish publishers, and the remaining ones by various Protestant groups.

The periodical publication has an especial value for Christian formation. First, it is designed to comment on and interpret a variety of subjects that are associated directly or indirectly with the child's growth in religious concepts and attitudes. Secondly, its messages are regularly and appropriately spaced so that man, earth-oriented creature that he is, can benefit from the blessed regularity of the periodical reminders. Thirdly, a periodical has a high psychological appeal in that it combines two qualities peculiarly dear to man: pleasant familiarity with stimulating novelty. Certainly such an instrument has a distinctive value, one we cannot afford to neglect in our education of Christians.

Anton Pegis, in a fiftieth anniversary address to the National Catholic Educational Association, said, in part,

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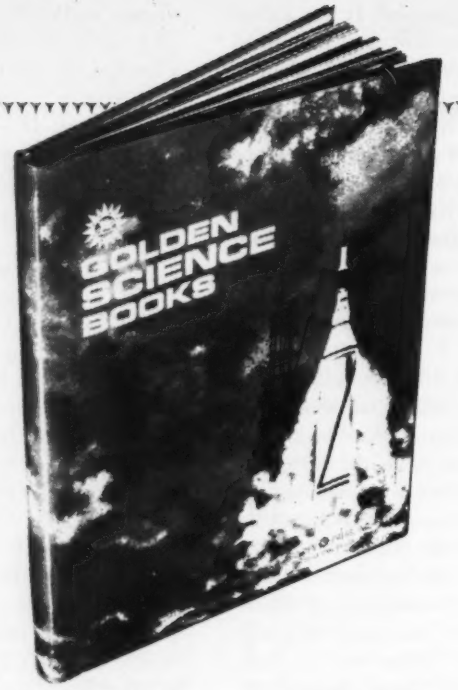

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Teacher to Teacher ...in Brief

A Seventh Grade Class Discusses Extreme Unction

By Sister Robert Marie, S.L.

NOVEMBER BRINGS THOUGHTS of the Holy Souls and death. It is an appropriate time to consider the beautiful Sacrament of Extreme Unction. Last year, in an effort to discover the class consensus regarding the circumstances under which extreme unction should be received and the specific amount of knowledge my seventh graders possessed, I resolved upon a modified question-answer technique to promote discussion. The following is typical of the classes held during a two-week period.

Typical Teacher-Pupil Exchange

TEACHER: Do you already know something about the Sacrament of Extreme Unction?

PUPIL: Holy Eucharist, Penance, and Extreme Unction, when received together are known as the "Last Sacraments."

T: Are you trying to say that these must be the last sacraments a person receives?

P: Well, they are the last if he dies after receiving them.

T: Then it is not strictly a case of being anointed before being driven to the mortuary; is it?

P: No, I suppose about as many people get better as die after receiving extreme unction.

T: Someone tell us then just what extreme unction does for a soul in danger of death.

P: The catechism says that it strengthens the soul to meet death, and sometimes heals the body if God will it.

T: Quite right. Does that answer suggest anything regarding the time for administering this sacrament?

P: We shouldn't wait until a person is dead before calling a priest.

T: No, I can see your point there, but how about waiting until the sick one has become unconscious so as not to frighten him?

P: I know that the doctor told my father not to call the priest when his brother was so sick, but Uncle Bill died without the sacraments.

Do Something About Foolish Talk

T: Do you think children your age can do something about this foolish talk about frightening a sick person?

P: I guess we could all tell our parents that if we ever meet with an accident or get poisoned by food or anything, we want them to call a priest just as soon as they call the doctor.

T: That would be good, but how about the grown-ups who are scared?

P: Maybe we could have our dads and mothers hear our catechism lessons these nights and then they would get to know as much about it as we do.

T: That would help some, but it would be better still to take notes on all we're going to say during these days and talk about some things which are not in your catechism. Why should Catholics not be afraid to receive extreme unction?

P: Extreme unction is one of the sacraments of the living and it increases grace in the soul. Shouldn't that be a comfort and not a shock?

T: Indeed it should. And who remembers what we learned to call the Church during our lessons on her precepts?

Church as Our Holy Mother

P: You told us to think of the

Sister Robert Marie teaches mathematics at St. Mary Junior High, Sterling, Illinois. A graduate of Loretto Heights College, Sister has contributed to the *Catholic Home Journal*, *Catholic School Journal*, *America*, and *Reader's Digest*.

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Teacher to Teacher—In Brief

(*Continued from preceding page*)

church as our holy Mother—and I see what you mean—mothers don't try to frighten their children especially when they're sick or dying.

T: You are very right, child. Mothers know what is best for their children and want them to get the very best they can provide in the way of remedies.

T: Someone said that extreme unction helps one who is in danger of death—what's dangerous about death? God is our Father; heaven is His home—who has something to say about that?

P: When you put it that way, Sister, I guess the danger sort of disappears. But I don't think that answer really means the word "danger" to mean it that way—only that if one is liable to die as a result of sickness, old age, or accident.

T: Fine! Let us get back to the right time for giving extreme unction to a sick person. Who wants to add something?

P: I think that the sick person would get much more grace from the sacrament if he were conscious and able to pray along with the priest and have some sort of understanding of what's going on.

T: Who told you that, Paul? You're perfectly right. Who knows what is going on while the priest is administering this sacrament?

P: Well, I know the priest uses holy oil and rubs it all over the sick person.

T: All over, you say? Well, not quite all over. What part of the sick person's body does the priest anoint?

P: The priest anoints the sick person's eyes, ears, nose, mouth . . .

T: Pretty good, but what else?

Anointed Hands and Feet, Too

P: I watched Father O'Brien anoint my grandfather, Sister, and he anointed his hands and feet too. Why did he anoint his feet?

T: Think for a minute about these parts of the body. What can a person do with their help?

P: Lots of things, Sister! He can see, hear, smell, eat; he can pick up things, and walk, and . . .

T: Hold on there! Let's not go quite so fast. Certainly he can do those things, and if these acts are good acts, or if they're wrong acts, it's all the same—is it?

P: Of course not! If they are good acts, God gives him an increase of grace, but if they are wrong acts, they're the same as sins and then God takes away His grace.

T: How right you are, Mary. Then we can say that our Holy Mother the Church gives these parts of the body a special blessing and asks our Lord to do something for the sick person. What do you suppose this "something" is?

P: Is it to forgive all the sins he has committed by using these parts of his body?

T: It most certainly is just that. When a sick person has confessed his sins, received, if possible, the Holy Eucharist, and has been anointed with the blessed oils of extreme unction he is ready to die.

P: How about old Mr. O'Leary, Sister? He had been to Mass and Holy Communion the day he got killed, but Father gave him absolution and Holy Communion and then anointed him. Wouldn't he have

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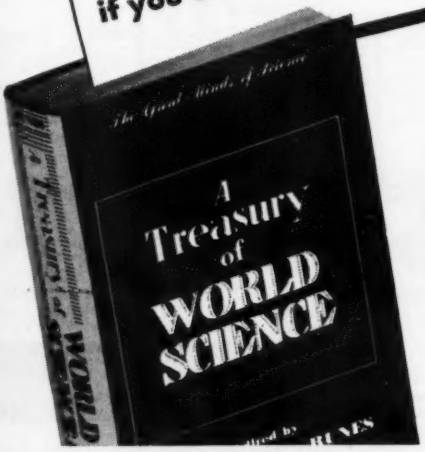

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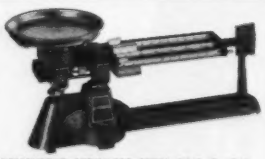

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Teacher to Teacher—In Brief

(*Continued from preceding page*)

been ready to die without all that?

T: He probably would have been ready to die, Thomas, but there's a big difference in being just ready to die and being ready for Heaven immediately after dying.

Straight to Heaven

P: Are you trying to tell us, Sister, that a person goes straight to Heaven after receiving the Sacrament of Extreme Unction?

T: Why are you so surprised, Thomas? You are again forgetting that your Church is your Mother. Does a mother want to punish or even keep her child away from her after he has proved himself to be sorry for his sins, and has worked with the graces God has given him to wipe out the punishment of those sins?

P: I guess there is something to what you say, after all, Sister. Then, receiving the Last Sacraments must have something to do with plenary indulgences.

T: You did some deep thinking to come up with that, Jerome. Yes, that is the idea. Even a person who has received conditional absolution at the time of death, and is anointed while unconscious is most likely to avoid purgatory when he dies.

P: If extreme unction does that then, before such a person lost consciousness he must have made an act of perfect contrition. Am I right?

T: You most certainly are right. He had to express his sorrow in some way, either by thinking it or actually saying it. Does any child here know the prayer which helps the sick person express this sorrow for sin and enable him to have all punishment of his sins completely canceled?

P: I don't think I do, Sister. But from all we've said, it must be a prayer of great power.

Part of the "Sign"

T: It is. Remember this prayer is part of the "sign" of this wonderful sacrament. As the priest anoints each one of the sick person's senses, he repeats these words, "By this holy anointing and His most loving mercy may the Lord forgive you whatever wrong you have done by the use of your sight, hearing, etc."

P: Sister I think everyone of us should repeat everything we have learned about extreme unction to everybody in the parish. Nobody should be frightened by death when it's so easy to be prepared for going to heaven. It's as quick as lightening flashes across the sky. Everybody should be instructed on the wonderful power of this sacrament to transport a soul from earth to heaven with no stopover in purgatory.

T: If you remember well what has been taught during these classes you can become apostles of extreme unction and encourage scores of souls to ask for the Last Sacraments before they join Christ, His Mother, St. Joseph, and all the angels and saints in heaven.

SUGGESTIONS we hope prove helpful

FOR PIONEER UNIT

Community loans—many valuable antiques—make thrilling pioneer exhibit as told by Kathryn Seville in the Indiana Teacher magazine. Digest of article, below

Citizens lend their prize antiques (even collectors' items) to our 6th grade for our annual pioneer exhibit. Some items are over 100 years old. Appreciation of our heritage is stressed in this unit of work. Although part of English studies, it combines social studies, art, music, and some arithmetic.

Before first item is borrowed, there is class discussion about need for careful handling, importance of dependability, and respect for the property of others.

For our 9th exhibit 400 items were loaned. As each is brought in by a pupil, two committees start to function. Meticulous records give history of item and names of pupil and lender.

These records are basis of pupils' 48 page mimeographed catalog. Numbers help visitors quickly to identify the antiques.

When exhibit is arranged, part of English assignment are letters to other teachers and classes and invitations to lenders, parents and relatives. Pupils write script.

Theme of program usually comes from some item or unusual antique loaned. Once it came from etchings of early Americans and included songs and verse about Washington, Benjamin Franklin, Noah Webster, Francis Marion.

Items exhibited have ranged from 400-year-old arrowhead to spinning wheel, samplers, 108-year-old cradle, McGuffey reader, coverlets, battle flags, old candle mold, and 1812 sword.

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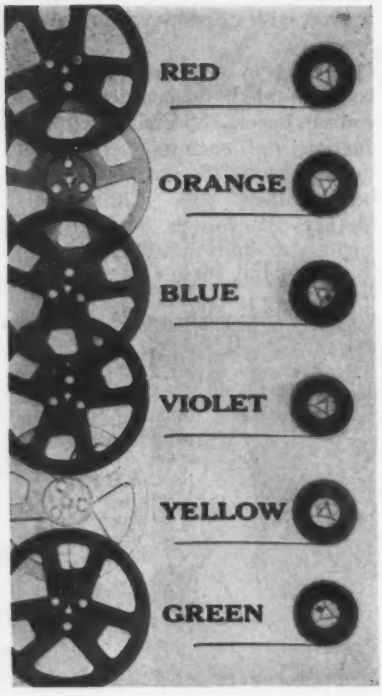

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(*Continued from preceding page*)

HISTORY: DEEPENING THE AIMS

By Sister M. Diana, O.P.

THE CURRENT DISCUSSION, which is getting progressively warmer, on the aims of Catholic education makes one hesitate to thicken the plot by proposing more depth, further purpose. Few will deny, however, that such an airing sharpens one's own sense of dedication and by its very heat forces the teacher to a self-interrogation on the *why* of his classroom performance. One of the more satisfying aspects of teaching is the discovery each year, even in the repetition of the same subject matter, of values previously unrealized. And now, more than ever, the history teacher can explore the "deep things" of his course. The subject he is responsible for, in fact, has what can be called a "contemplative potential" which must be touched; for there is a tide in the affairs of men now, that dates and battles and scientific revolutions cannot explain.

"There are moments," Christopher Dawson has written recently, "when the obscurity of history seems to be suddenly illuminated by some sign of divine purpose . . . such is the age in which we have the privilege and misfortune to live today."[1]

Taught to Explore

The "deep things" which history students can be taught to explore concern this divine purpose of which Dawson speaks.

In an age whose pulse is being measured by the countdown on a rocket-launching pad, and whose art reflects the frightening loneli-

---

Sister M. Diana teaches English, French, and journalism at Our Lady of the Elms High School, Akron, Ohio, where she is also publications advisor. Previously, Sister taught for six years at St. Vincent High School, Akron. A member of the American Association of Teachers of French and the national and diocesan press associations, she has contributed to the *Catholic Digest*, *The Scholastic Editor*, and to *National Poetry Antology*. She is a graduate of Siena Heights College, Adrian, Mich., and has an M.A. degree from John Carroll University, Cleveland, Ohio.

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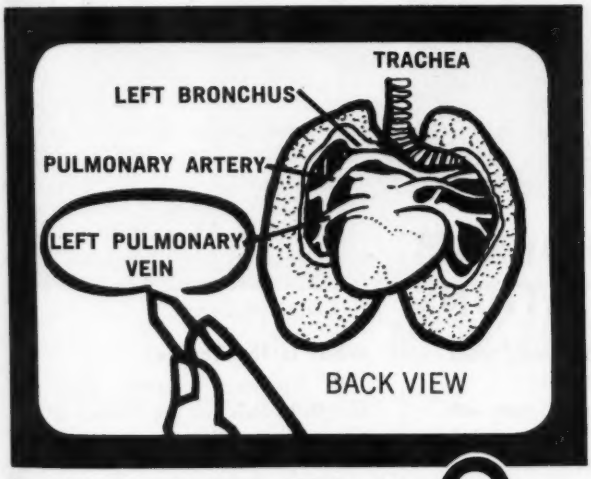

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Teacher to Teacher—In Brief

(*Continued from preceding page*)

ness of men, there is for the teacher a necessary apostolate: its aim is to show the student not only how we're getting off the planet, but how we must stay rooted to something deeper than the universe. Not only sanity, but salvation is at stake.

The exploring of the divine purpose is not to turn the history course into historicism or a series of lectures on Providence, but rather to convince the student that history is more than a narrative of *faits accomplis* and a training ground in the mechanics of memorization. It was St. Thomas who pointed out that the student must realize he has a problem; and that this realization begins the learning process. The "problem of history" is one of awful moment.

But Why?

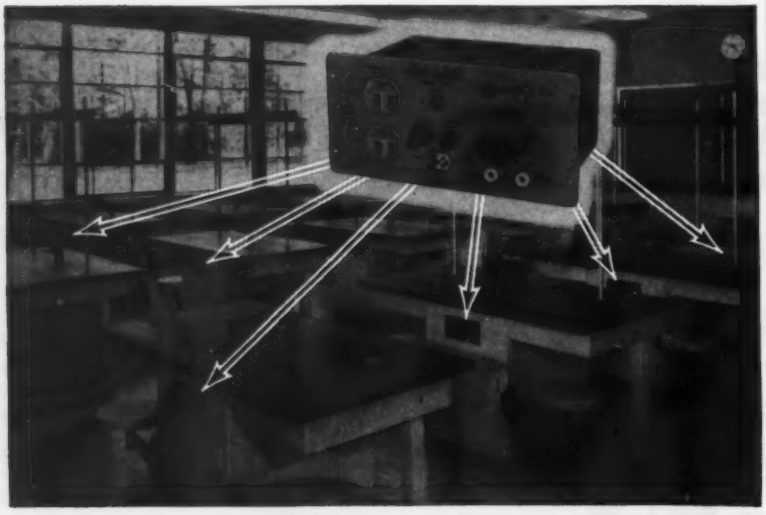
How explain, for example, the ultimate causes of world events? The disasters, the toppling of kingdoms and empires, the mustard seed whose branches shadow the world? These things have happened. About that there is no question. But *why*? Through what instrumentality? To what end? What relationship is there between a Jeremias and a Xerxes, a Leo and Marx and Pius?

Few have the temerity to suggest a definitive answer to what is basically the consequence of a life of faith. The darkness in which we move will never be completely dispelled in our present condition. But faith is a light, too; and there are thinkers who have used this light; who have put the historical fragments together into something more than a plotless narrative. It is no wonder men are anxious if they do not understand that chapter follows chapter according to a plan; that there is a conclusion; and that they themselves are not only characters, but in some mysterious measure, co-authors.

To the historians, the philosophers, the theologians, these concepts are anything but new. From Old Testament writers and St. Augustine, to Maritain, Gilson, Dawson, and Danielou in the present day, thinkers have wrestled with the relationship between sacred and profane history, theologies and philosophies of history, "views" of history, the Second Coming, and the Kingdom of God. Not often enough, however, have students been asked to struggle a little with the same problems.

What Is the Theme?

In literature classes, they are taught to look for the theme, to analyze the conflict, to study the author's treatment of the problem of evil. This has been a standard approach for years. The same students can be approached then in a social studies class through the same questions. What is the theme of world history? One wonders how many would reply that there is no theme; that everything is unrelated. Or if asked to classify the basic conflict of world history, how many would answer in terms of "democracy vs. dictatorship" or "scientific and cultural progress vs. ignorance" or simply "man against man." Again, what answer would the average student suggest for the



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Teacher to Teacher—In Brief

(*continued from preceding page*)

mystery of human suffering, for the trial of wars, and famine, and death, and greed that winds through the pages of the text like so much cancer? These are things he must learn to think about. The more so, as they are *not* fiction.

Joan of Arc they know of as a saint and as a historic personage of no little consequence. In her life, as in the lives of Gregory, of Thomas More, and Hildebrand they see the mingling of two worlds; they see actions of historic and eternal significance. They "see"—more so than the saints themselves did, perhaps, the purpose of God's action in those souls.

Permissive Will of God

But what of the permissive will of God in the Attilas, the Hitlers, the Lenins of the world? What is the good that will be drawn from the rending of the Bride of Christ into "Orthodoxy" and Rome? Surely the young, whose ceaseless and sometimes rebellious "whys" so often disturb the equanimity of adults, surely these students can be urged to direct their queries into the historical process. But with guidance.

God is no less interested in Hungary now than in France under Charles VII, no less a mathematician than when Christ spoke of the hairs of our heads. And if dinosaurs have passed into oblivion, no matter. We are, after all, of more value than many dinosaurs.

And if Joan of Arc had a mission, Lenin was permitted one; if Catherine of Siena was inspired to mend the robe of Christ, Photius and Luther and Calvin were permitted to tear and burn it. We are still tangled in the shreds and coughing in the smoke, but all things are yet in His power, and we cannot, says the Psalmist, flee, even, from His presence.

From history then into contemporary affairs: there are events that are willed and events permitted; missions inspired and "missions" tolerated; and all things are in the palm of His hand. And all peoples.

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About the Author

THE WHAT AND WHY OF CATHOLICISM is written by a priest whose pen and tongue have been extraordinarily active in the apostolate of apologetics. His writings have appeared in journals for the Catholic clergy, magazines and newspapers for the Catholic laity, and he has produced numerous pamphlets.

Apart from his own convert work as a parish priest, Father Paris has lectured in non-Catholic universities and law schools throughout the country and has served as chaplain for Catholic students in two such institutions.

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Teacher to Teacher—In Brief

(*Continued from preceding page*)

Church because we are Christ's. So too, in the historical process. We are *in* history. We are part of a plan, a design; not caught in a fatalistic destiny, but carried lovingly in a providential one. There are kingdoms and a Kingdom; Presidents and parliaments and an Eternal Lawgiver; wars, and a struggle that has been millenniums in duration.

Seen in this perspective, history as an objective body of knowledge can be made subjectively vital.

Walt Kelly (of Pogo fame) relates the old story of two frogs who traveled to the summit of a mountain in order to see what the land beyond might look like. But, of course, with eyes on top of their heads, they saw nothing of the land ahead, but only what they had traversed. Being disappointed thus in the view, they grumbled, and each retraced his steps. "And the miracle of the story," says Mr. Kelly, "lies not in the fact that both were fooled but that from such a vantage point neither had seen anything strange, wonderful, or new about his home country."[2]

History is not a series of courses for frogs—creatures with eyes to see the past only. It can be conceived of as a view from the summit of the present moment, where things "strange and wonderful and new" can be revealed. And where one's own mission can be accepted in faith, with a certain joy, and without that shaking of the fist in the face of God which, in any world language, needs no translation.

View from the Summit

This view from the summit which history affords gives perspective also. Things big are seen as big; things insignificant, as trivia. A good history course can strengthen the vision of more than one near-sighted victim.

And for those who stamp their feet and pout about their fate—whatever it may be at the moment—an injection of the problem of history may reveal to them the truth enunciated by Maritain:

> There can be no rest for the Christian as long as justice and love do not hold sway over the lives of men. And since their requirements will never be completely fulfilled within history, the Christian will therefore never have rest within history—and that's perfectly proper to his condition.[3]

There are times when we must accept the fact of evil, and all the while struggle against it.

This is indeed a conflict.

If the student thinks the past is past, and the battle's over and done, it should be suggested that he review the plot. The Villain is still at large, and our fighting is not against inter-continental missiles alone. St. Paul has suggested the kind of armor we need. Too few people are aware that there is a struggle.

Among the aims, then, of any history course, must be included that of imbuing the student with an historical consciousness: there is and will be a conflict; there are deeds to be accomplished, and roles have been assigned. Living is

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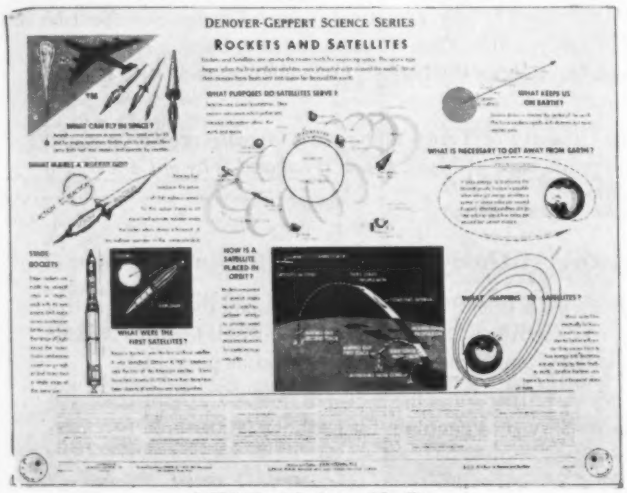

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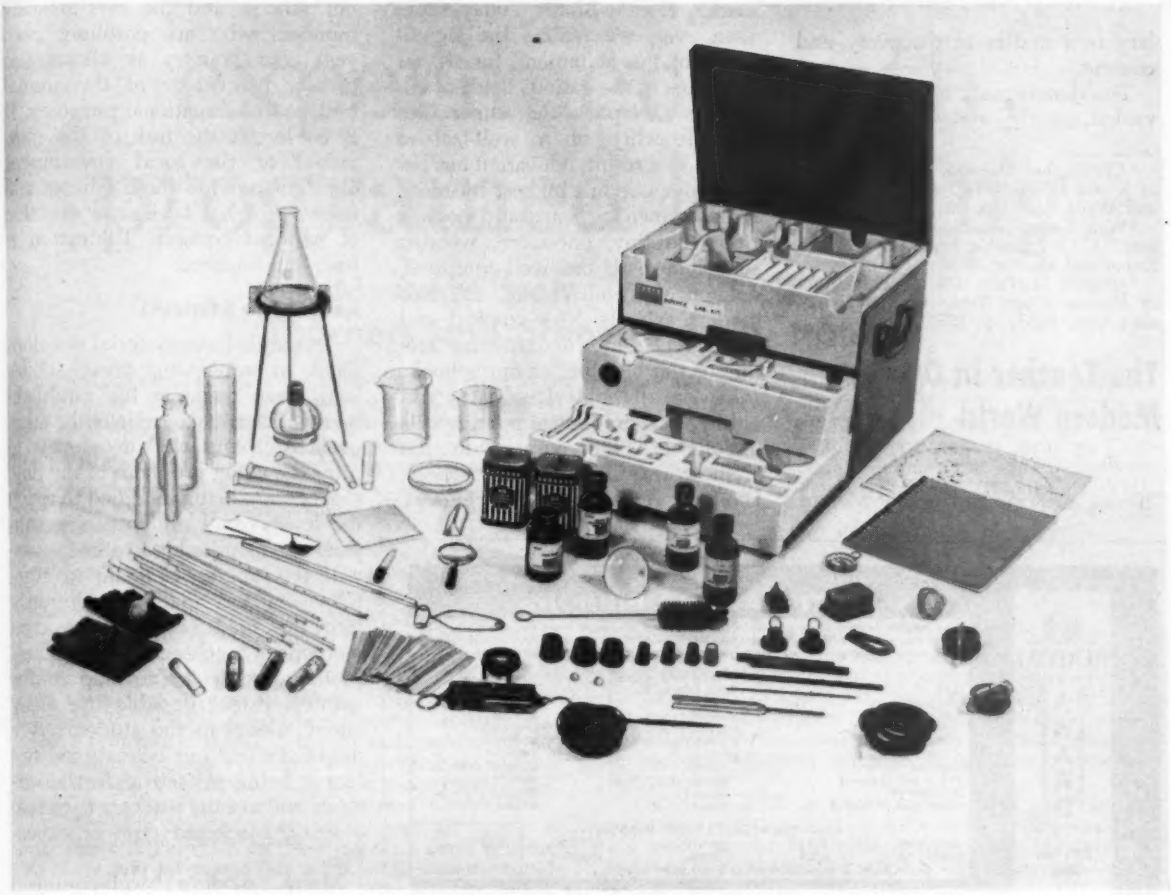

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UMI

Teacher to Teacher—In Brief

(*Continued from preceding page*)

largely a matter of discovery and consent.

The denouement is yet to be revealed.

[1] Christopher Dawson, *The Movement of World Revolution* (New York: Sheed and Ward, 1959) p. 101.

[2] Walt Kelly, "The Abominable Snowman," *G.O. Fizzickle Pogo* (New York: Simon and Shuster, 1958).

[3] Jacques Maritain, *On the Philosophy of History* (New York: Charles Scribner's Sons, 1957), p. 155.

The Teacher in Our Modern World

By Sister Mary Paul, O.S.F.

"Every addition to true knowledge is an addition to human power." Thus wrote the noted American educator, Horace Mann. Today, more than ever, we realize the significance of this statement, for all our advances in the various fields of endeavor exemplify the importance and necessity of a well-trained mind. As a result, education has become our nation's biggest business. It has grown by leaps and bounds from the tiny, one-room, wooden schoolhouse to the well-equipped, magnificent edifices we call our modern schools. Now comfort and convenience are determining factors in the building of our schools. Likewise, all the devices that would aid in providing better learning situations are incorporated in the architectural plans of a new school. Having become very conscious of the need for increased facilities for the millions of children already in our schools and the ever-growing numbers who are enrolling each year, our country is allotting a greater percentage of the annual budget for educational purposes. It is no longer the task of the individual or the local government alone to provide these educational facilities; it has become a situation of national concern. Education is truly big business.

Refitted to Students

To parallel our material development in education, great strides have been made in the establishment of curricula sufficiently comprehensive and well developed to meet the rising problems of the day. Courses are being modified to reach the levels of all students; new subjects are being added to keep pace with the progress of the Space Age; television has made its entrance into the field of education; and methods of teaching are being completely revised to develop to the greatest extent possible the many latent talents in the students. We might say that our educational system is being revised to fit the students and not the students to fit into a straight-jacketed type of education.

Many modern well-equipped schools are fine; a thorough curriculum is important, but we may not forget there exists a third essential in the field of education, the teacher. The teacher is still and always will be the vital factor in bridging the gap between ignorance and knowledge. Suffer the loss of teachers and an educational system collapses. It is imperative to learn we need someone to instruct and guide us, someone who will show by word and example the value of education and the best means to use in acquiring it. This tremendous task belongs to the teacher.

Like a Candle

Giovanni Ruffini, the Italian novelist, once said, "The teacher is

Sister Mary Paul teaches grade eight at St. Agnes School, Chicago Heights, Ill. She has been teaching for eleven years, the past seven of which have been devoted to teaching the eighth grade. Sister received her education at St. Francis College, Fort Wayne, Indiana. She has contributed to the *Catholic School Journal*.

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Teacher to Teacher—In Brief

(*Continued from preceding page*)

like the candle which lights others in consuming itself." Where could we find better proof of this statement than in the life of the most excellent of all teachers, Jesus Christ. His whole life was a consummation so that others would learn the Divine Truths. "Can a blind man lead a blind man?" He once asked. "Will they not both fall into a pit? A disciple is not above his teacher." So also in our modern day, our teachers are consuming themselves to make this an educated people. Perhaps in no other profession is one asked to give so much, yet receive so little; to satisfy so many, yet be given so little thanks in return. Years are spent in adequate preparation for this work and summers are devoted to the pursuit of greater knowledge for increased effectiveness in teaching. Salaries are comparatively low for the amount of time and effort that must be put into a teacher's work. Much demand is made of a teacher's time to aid in extracurricular duties which may often prove burdensome, and personal interest in the problems of individual students often demands attention outside of regular school hours. These and similar circumstances create the annoyances, heartaches, and disappointments that beset every teacher at one time or another during his career.

To look only at the difficulties of the teaching profession would be sheer pessimism. There are the genuine teachers, those truly devoted to their work who count these difficulties as nothing in comparison to the rewards they can claim. There must be something more in the way of compensation which inspires so many fine men and women to devote their lives to the education of others.

A glance at the material rewards shows that a teacher has the opportunity of making professional and social contacts; diversified activities which eliminate monotony; vacation periods which are longer than in comparable vocations; regular employment and a steady income, and provision in old-age and disability.

These are worthy rewards indeed, but one is inclined to believe that in our modern age our teachers by-pass the thought of these rewards as incentives for entering the teaching profession in favor of those of a more lasting and nobler aspect. Teachers are becoming increasingly conscious of the fact that their work offers unlimited possibilities in rendering service to society. The future of a nation, in a sense, lies in the hands of our teachers. As Lord Brougham, the Scottish statesman so aptly put it, "Education makes a people easy to lead, but difficult to drive; easy to govern, but impossible to enslave." The realization that as a result of his guidance, former students have become useful and happy citizens is one of the greatest rewards a teacher can experience. "He was my former student" often expresses the depth of personal pride and satisfaction that can come to a teacher when he learns of the successes of his former charges.

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(*Continued on page 300*)

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Book Reviews

The World Book Encyclopedia. Nineteen Volumes and Reading and Study Guide (Field Enterprise Educational Corporation Merchandise Mart Plaza, Chicago 54, Illinois, 1961).

The 1961 *World Book Encyclopedia* is an invaluable tool for the home, the library, and the entire school range from the 3rd grade through the junior college. Using continuous revision, the editorial staff keeps *The World Book* up to date on such events as the 1960 census figures, the election of President Kennedy, and the 50-star flag. Its maps keep pace with the changing world as one traces the headlines on a map of the Congo, or reads the articles on eight of Canada's major cities, with five of them each including a full-page map spread in *The World Book*. Information from the latest First Aid techniques with illustrations to the sending of a man into space provide readers with the most complicated technical processes simply explained.

Other highlights of this 1961 edition are the brilliant color illustrations of the eye, ear and brain, the article telling why and how the post of the Vice-President has increased in importance, the do-it-yourself approach to Interior Decorating, the illustrated treatment of the newly approved mouth to mouth method of artificial respiration, and the new long biography of the 35th President of the United States. The material on Vocational Guidance is particularly good.

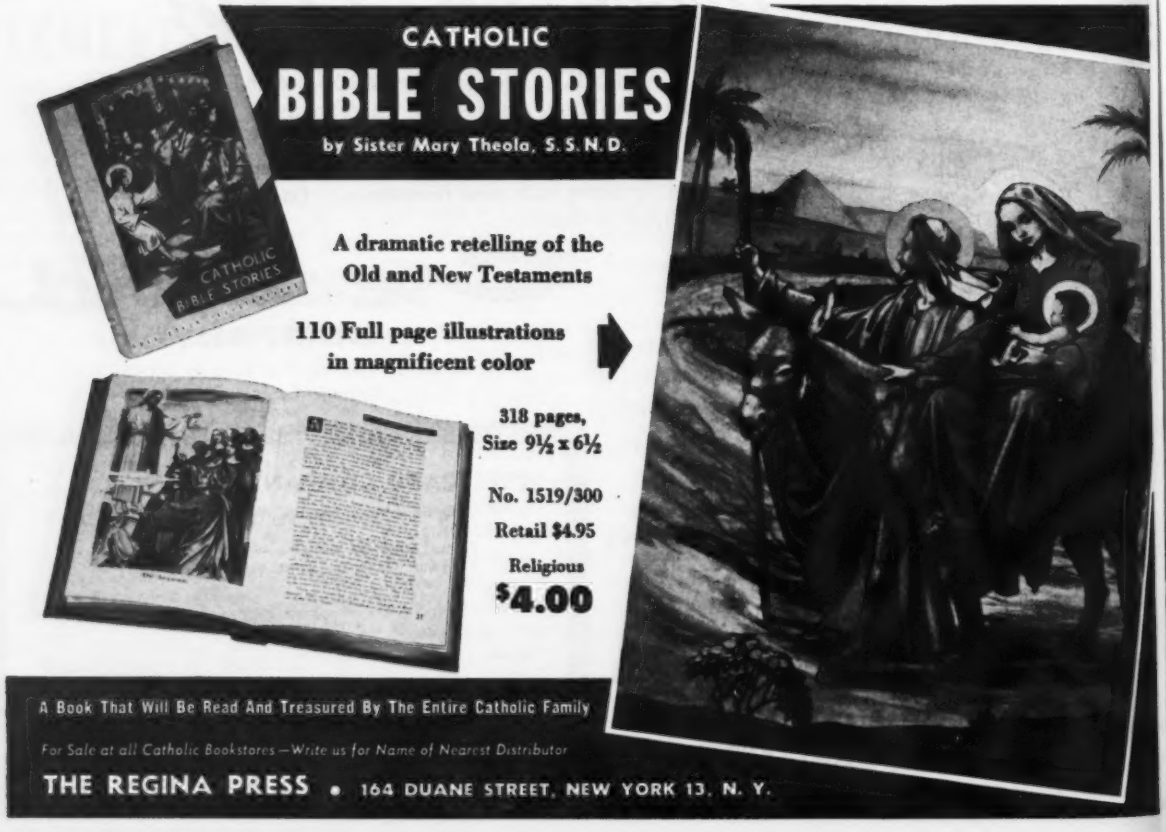
The policy of *The World Book* is that of continuous revision. It makes changes wherever and whenever they are called for. Therefore, the editorial staff is constantly surveying subjects so that with each printing, once or twice a year, articles are brought up to date.

The list of more than 2,500 contributors include top names in every field. Among them are eighteen Nobel Prize winners. Under the direction of the noted scholar and curriculum authority Dr. W. H. Nault, the *World Book* research staff has given us, after extensive research, an encyclopedia that both complements and supplements the school curricula, for it is, perhaps, more up-to-date in Science and World Problems than are the text books.

The new 1961 edition contains 4,194 newly-revised pages, has added 147 short articles, revised 1,154 short articles, revised or added 640 illustrations, added 69 new contributors and added 192 cross-reference entries.

In 20 volumes of over 11,700 pages, 22,400 illustrations, 5,900 color illustrations, 1,725 maps and over 2,500 contributors, *The World Book* becomes almost a *must* in every home with growing children, a *must* in every library, and a *must* in every classroom.

Articles are signed and there are many cross-references to related subjects. Volume 20 is a Reading and Study Guide serving as a classified index. Exact references are given to volume and page. Information desired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is found quickly and easily and is written in simple, clear language; yet the information given is comparable to that found in a good adult encyclopedia.

Annotated bibliographies follow many general articles. At the beginning of the "A" volume is a list of contributors. The articles are signed by these contributors who are responsible for either the original matter contained in the article or for the accuracy of the research. Controversial subjects, such as the "Bible," are presented objectively. The "Bible" article written by the noted scholar Dr. Edgar Goodspeed was critically reviewed by Bishop Fulton J. Sheen (Roman Catholic), by Rabbi Rosenbaum (Jewish) and the Reverend E. H. Wahlstrom (Lutheran).

The single alphabetical arrangement of topics is used. All subjects, beginning with the same letter of the alphabet may be found in one volume. At the end of an article are listed related articles which encourage readers to delve into other phases of the subject. A pronunciation guide for difficult or unusual words is especially good for young or old readers. Especially valuable for school use are the outlines that follow certain major articles and the questions that follow broad-area subjects.

Teaching aids are available. *Lookies, 1200 Questions,* and *Through the Year with World Book* are excellent booklets to be used in the classroom or for homework in the elementary school. Two filmstrips and a number of Unit Teaching Plans are also available.

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SISTER M. HARRIET, O.S.F.
Principal, Charleston Catholic High, Charleston, W. Va.

Electricity and Electronics—Basic. 2nd ed. By William B. Steinberg and Walter B. Ford (American Technical Society, 1961; pages 262; price $4.50; Study Guide price $1.50).

This book, a clear and interesting explanation of the basic principles of electricity and electronics, was prepared primarily for industrial arts instruction in the junior high school. Its scope is such, however, that it is also used in industrial arts classes in the senior high schools, in adult evening programs, in some apprentice training programs and some beginning college work.

The first eight chapters deal with the nature of electricity and magnetism and with methods of generating electricity from magnetism and chemical sources, as well as from friction heat and light. This is followed by six chapters dealing with basic electrical circuits, the measuring of voltage, current, resistance, and wattage, and the mathematical relationships between these quantities. Eight chapters are then devoted to everyday applications of electricity including its generation and transmission, the use of transformers, and electrical circuits and appliances in the home and automobile. The remaining seven chapters of the book deal with communications. Vacuum tube and transistor fundamentals are discussed together with their application to radio and television.

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The treatment of these topics is in simple language and non-mathematical. The only section in which any mathematics is used is in the treatment of Ohm's law and wattage formulas, and this is done strictly on the eighth grade level. No more theory is given than is absolutely necessary to understand the applications of the principles, and no previous knowledge of science is presupposed. The presentation is well within the ability of the ninth grader.

In keeping with the desire to present a practical rather than a theoretical approach to the subject, over fifty projects are provided for the student. Galvanometers, voltmeters, ammeters, ohmmeters and other test instruments are made and used. Motors, power supplies, and several radios including a simple transistor set are also constructed. Most of these projects use simple, inexpensive components with instructions given that are easy to follow.

The student who uses this text gains a knowledge of the symbols and instruments used in electricity and electronics and of the basic principles and applications of these fields.

BROTHER GERALD, C.F.X.
Mount St. Joseph High School, Baltimore, Maryland

Physics for the Space Age. By Richard W. Schulz and Robert T. Lageman (J. B. Lippincott Co., 1961; price $5.60).

Physics for the Space Age is a high school textbook that will be welcomed by the teacher who has suffered the frustration of never being able to "finish" a physics course in one year. In this 1961 publication, the authors have taken the liberty of deciding which items can best be left out of a bulging physics curriculum which would attempt to present both classical and modern physics in two semesters of work.

While *Physics for the Space Age* was written and designed primarily for students who rank academically in the upper half of the eleventh and twelfth grades, the material has been chosen to meet the needs of those whose formal science education will most likely terminate with this course as well as those who are preparing for more highly specialized science study. Though strong emphasis is placed on the principles of physics, applications to technical and everyday experiences are included as part of this design.

The text follows the traditional method of organizing the contents in units which are subdivided into related chapters. Each chapter is supplemented with a "workshop" which includes a chapter summary, problems and suggested projects.

The text is enriched with effective illustrations and functional use of color. Example problems are enclosed in colored boxes. An appendix to the book offers a review of mathematics and tables of physical data. In the conviction that such a listing discourages personal research, the authors chose not to include a glossary.

The 465 pages of *Physics for the Space Age* are a stimulating contribution to modern science education.

SISTER M. CONSTANCE, O.S.F.
Charleston Catholic High, Charleston, W. Va.

Experiments and Exercises in Physics. By John W. Renner and Harry B. Packard (J. B. Lippincott & Co., 1961; price $2.00).

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The Catholic Elementary School Principal. By Sister M. Jerome Corcoran, O.S.U. (Bruce Publishing Company, 1961; pages 479; price $6.50).

The need of a good textbook for courses in the Catholic elementary school principalship has long been recognized. At least fifteen years ago Bruce was looking for such a book to replace the specifically public school-oriented texts so widely used up to now even in the training of Sisters. Here is a practical work, specifically oriented to courses for the Sister or the Brother Principal, and with helpful suggestions that will make the graduate student want to retain it on his or her desk for practical reference instead of sending it to the Motherhouse library.

Sister M. Jerome is a diocesan supervisor in the Diocese of Youngstown. Chapters in the fields of their own specialties were contributed by Father Leo Ward, philosopher of Notre Dame University; Dr. John P. Treacy, educationist of Marquette University; and Dr. W. W. Theisen, longtime assistant superintendent of schools at Milwaukee and now professor of education at Marquette.

This fortunate combination of authors has produced a well-written blend of administrative theory and of practical administration, covering the principal's relationships with ecclesiastical authorities, the school's patrons, and the public school system; the improvement of teachers, their teaching and their teaching conditions; the improvement of conditions for the pupil's learning; evaluation of pupil progress; grades, records, and reports; the administration and simplification of school clerical work; practical information and suggestions by Dr. Thiesen on the school plant; and even a kind of professional examination of conscience, prepared by Dr. Treacy.

The chapter bibliographies are selective rather than extensive and each contains a list of worthwhile and inexpensive pamphlet material.

Particularly important chapters in view of developing problems are those devoted to the lay teacher in the Catholic elementary school and to the provision of good working conditions for teachers, particularly lay teachers. These will help the principal to understand both the need for lay teachers and how the best possible lay teachers can be recruited and retained in service. Sister M. Jerome

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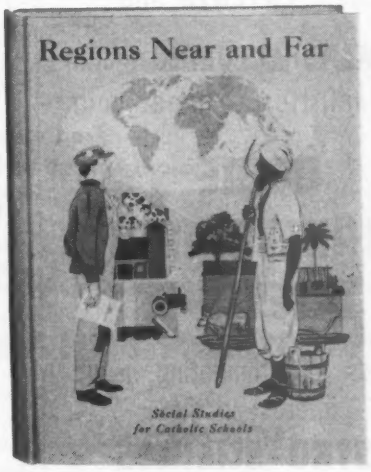

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does not hesitate in these chapters (or, in fact, anywhere in the book) to draw upon the experience of the public school system for helpful ideas.

On two specific points we must disagree with the author in her recommendations for the administration of lay personnel. Distributive justice and teaching staff stability will not be served by paying salaries equal to 80 per cent of those paid by the local public school; Sister M. Jerome does use the qualifying phrase "at least" but in these matters intended minimum standards are too often interpreted as the maxims permissible. In the administration of sick leave, the illustrations used allow no sick leave credit for any month in which the teacher is absent for illness, so that a teacher entitled to ten days per year of sick leave and who used one day in each of ten months would have her salary "docked" for every one of the ten days. The illustrations would require her to teach every day in a month in order to earn one day's sick leave, applicable only in a subsequent month.

But these are mere imperfections, and it is a great thing that at long last there is a Catholic book available in this important professional area. The imperfections can readily be removed in the second edition, which we are certain the demand for the book will require.

FRANCIS J. DONOHUE, Ph.D.
Assistant to the Academic Vice-President, Fordham University

Among the Paperbacks

Spiritual Canticle. By St. John of The Cross. Tr. and ed. with an introduction by E. Allison Peers (Image Books; pages 520; price $1.45).

The Divine Pity. A Study in the Social Implications of the Beatitudes. By Gerald Vann, O.P. (Images Books; pages 189; price 75¢).

Sense and Sensibility. By Jane Austen. With an introduction by Duke Schirmer (Washington Square Press, Inc.; pages xiv, 332; price 45¢).

Heart in Pilgrimage. By Evelun Eaton and Edward Roberts Moore (Image Books; pages 238; price 75¢).
A dramatic novel of the life of Mother Seton, Foundress of the Sisters of Charity.

The Case of Cornelia Connelly. By Juliana Wadham (Image Books; pages 276; price 85¢).

The Confessions of St. Augustine. Tr. with and Introduction and Notes, by John K. Ryan (Image Books; pages 429; price $1.25).

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An Essay on the Development of Christian Doctrine. By John Henry Cardinal Newman. Foreword by Gustave Weigel, S.J. (Image Books; pages 434; price $1.35).

The Heart of Man. By Gerald Vann, O.P. (Image Books; pages 190; price 75¢).

Teacher in Modern World

(*Continued from page 294*)

task and the gravity of the responsibility a teacher has, for he plays a vital role in shaping the lives of future citizens not only here, but also for the life to come. The real rewards of being a teacher are personal. They are found enclosed in the heart of every person dedicated to the betterment of the mental and moral standards of mankind. These are feelings difficult to put into words and most often only understood by a fellow teacher. Who can really express satisfactorily the thrill experienced in teaching a child to read; or, with your instruction and guidance, to see a class wake to the realization of the wonders of God's creation? Who can measure in words the happiness one has when wayward pupils, with your help, put aside the ways of error to embrace the more constructive processes of learning and development? All this constitutes the unwritten language of a teacher!

A teacher is the embodiment of all that signifies advancement in learning, culture, and social adjustment. He is not only an instructor, but also a close friend and companion to those who need help. He is the backbone of a nation and surety against its decay. By his labors others succeed; by his inspiration others are made confident, and by the love he has for his work and his students greater love is fostered in the hearts of all with whom he associates. In very truth, we may say with Henry Adams, "A teacher affects eternity. He can never tell where his influence stops."

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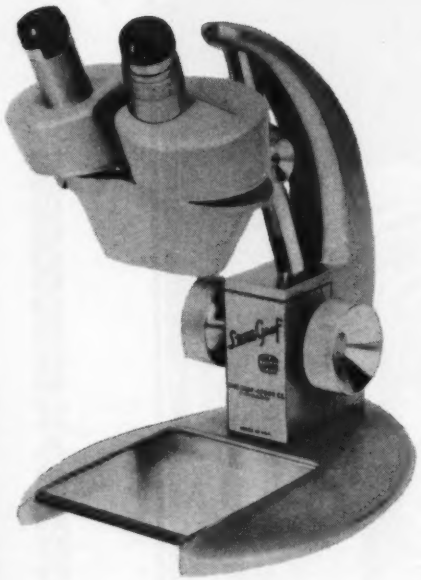

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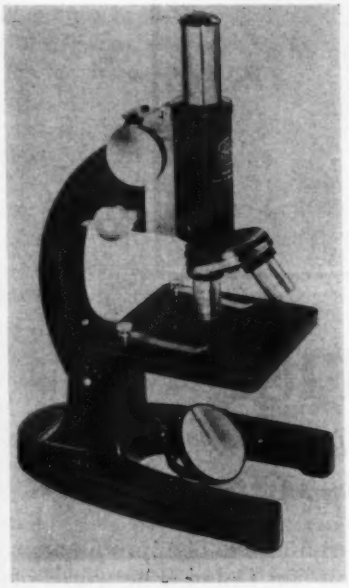

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Tomorrow's A-V Aids in Science Teaching

By Sister Mary Leona, O.S.B.

THE EFFECTIVENESS of TV and tape lessons have been clearly demonstrated by the members of our panel. It has been proved that tape teaching and television not only give the student the benefits of specially trained and talented teachers, but it also affords rewarding new learning experiences. We can see that the present TV lessons do not satisfy the needs of the student in many ways. The ideal would be a closed circuit TV within the school system or within the diocese. The lessons would be prepared by our own expert teachers, according to our course of study. The classroom teacher would know what is to be expected in future lessons; would be prepared to follow up the TV lesson with classroom participation and drill work. The teacher could prepare the child for what is coming and the student could participate in the experiment along with the TV teacher.

The closed circuit TV is actually in use in many places. Although the cost at present is almost prohibitive we hope that with improved materials and increase in number, the costs will come down.

Stratovision and Education Television by Westinghouse, representing the first full scale operational testing of Westinghouse Stratovision, the Midwest Program on Airborne Television Instruction, sponsored a period of demonstration telecasts which began in February, 1961 and are continuing through 1962.

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Stratovision, an exciting new milestone in education, expands the reach and variety of classroom instruction. Broadening the basic school program through closed circuit, educational television offers a system of unusual flexibility or originating in your own classroom studio. The closed circuit instruction, presents a new idea "team teaching" in which the studio teacher is responsible for the in-class follow-up. Working together they determine in advance what is to be taught, how the lessons should best be developed, and also plan what activities are best for class participation. After careful study they are better able to organize and prepare a constructive and effective lesson. By consolidating a number of classes into one television class, closed circuit television also makes it possible to have several instructors teach topics of the course in which they are especially qualified or interested. Taking turns in teaching parts of a course leaves time for teachers to engage in other activities, such as research, professional development, and course improvement. Also this rotation of duties permits members of the teaching team to observe one another's teaching techniques and encourages constructive suggestions.

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Sister Mary Leona is teacher of biology and chemistry at Benedictine Academy, Elizabeth, N. J. She taught in elementary school for five years and has been teaching secondary school mathematics and science for twenty-years of the New Jersey Catholic Round eight years. Sister was president for two Table of Science, chairman for seven years of its testing program, and chairman for three years of its tape committee. She is a member of several professional associations. She has given many workshops on tape teaching. Sister was graduated from Catholic University of America with B.S. and M.A. degrees.

Inc.; Educational Television Dept., Sarkes Tarzian, Inc.; General Precision Laboratories, Inc.; Radio Corporation of America; Thompson Ramo Wooldridge, Inc.; and Motorola Communications & Electronics, Inc.

I am sure that many of you saw Ed Sullivan's advertisement last Spring of an 8 mm Kodak Camera Projector with which you can add sound to your 8 mm movies. This is done by magnetic recording on a narrow stripe of oxide applied to the side of the movie film. In this way movies of a lesson or science class could be taken and the script added to the finished film. In this way you could really combine the use of the movie projector and the tape recording medium to present an audio and a visual tape lesson.

All of these wonderful helps that have been placed at our disposal will bring to the mind of the child a clearer understanding of God's wonderful world and bring him closer to attaining his end here and hereafter.

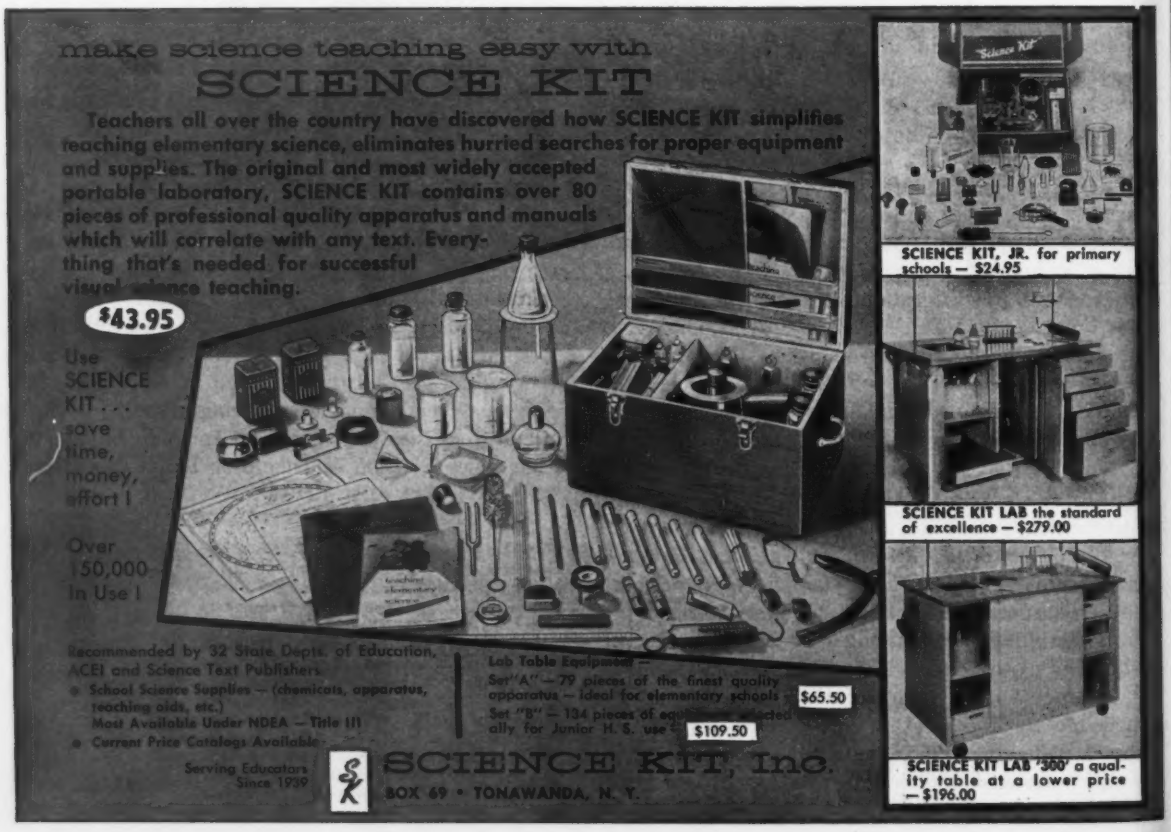
Today's A-V Aids in Science Teaching

By Sister Mary Cleophas, R.S.M.

TO SPEAK TO TODAY'S EDUCATORS about the effective use of audio-visual materials is nothing short of carrying coal to Newcastle. The point we should like to stress is the cultivation of a careful discrimination on the part of the teacher as she surveys the market flooded with a variety of gimmicks of every description. With an eye to immediate practicality let us consider what is at hand, commercial, teacher-made, or self-made, that is going to prove most beneficial to the pupil in his learning situations.

Let us look for a moment at our own school environment and what it has to offer, and then consider whether we are making the utmost use of what is available. The chalk board, the oldest of instructional materials, will never lose its potential as a teaching device. The magnetic board, adhereograph, or flannel board has more recently come into its own. In this age of depth projection, farsighted administrators have used the 3D museum cases to exhibit realia, mock-ups, and the like. Not only are these of supreme importance to the science class, but they relieve long stretches of monotonous wall space on school corridors. Last of the most common materials of instruction which serve to make learning more concrete is the

Sister Mary Cleophas is principal of St. Mary's Grammar School, Perth Amboy, N. J., which enrolls 1,400 pupils. She taught in the elementary school for eleven years and in high school for fourteen years, and has been elementary principal for five years. Sister is vice president of the New Jersey Catholic Round Table of Science, and is a member of several professional associations. She has conducted workshops in tape teaching on the elementary level and also science workshops in the Trenton and Newark dioceses and in the archdioceses of Washington and Los Angeles. She graduated from Georgian Court College, Lakewood, N. J.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classroom or laboratory bulletin board. Just a word in regard to its use—while the teacher is responsible for creating a stimulating learning environment she must not entertain the idea that the bulletin board is *her* display. Opportunity to prepare the semi-concrete presentation either alone or with a group is a rich, rewarding experience for any child. The obligation of responsibility, the satisfaction of ideas shared, and feelings of pride in excellent performance, are characteristics worth cultivating in our pupils.

"Go to See"

"Going to see," write Blough and Huggett in their *Elementary School Science and How to Teach It,* "is an important part of any effective science program." Not all teachers have yet been alerted to the possibilities of this direct as well as vicarious learning experience. There is nothing which recognizes the biological fact of individual differences more than the educational excursion or so-called field trip. If we may insert a timely suggestion here—as children become old enough to use them, cameras serve to increase the interest of the trip as well as to insure the permanency of acquired information. Here, if ever, the master teacher grasps the opportunity to make use of the theory of multisensory appeal in teaching. Photographs may later be brought into the science class and evaluated. Can there be a better way of bringing the community into the classroom? A program of field trips while flexible, needs long-range planning on the part of the teacher or co-operatively with her pupils, in order to determine a clear understanding of purposes, responsibility for the acquisition of new knowledge, and a final evaluation of outcomes.

Let us now turn to those instruments of communication included in mass media, namely films, filmstrips, radio, recordings, and television and the possibilities they offer for enriched learning. Today the question is not to what extent these mass media are at cross purposes with the objectives of the schools and of parents, but how far they affect the child's stock of information, his attitudes, his speech, his occupational preferences, or even his behavior. That they do affect the growth and development of the pupil or student is undeniable, since the child spends more time with the mass media than with any other voluntary educational agency.

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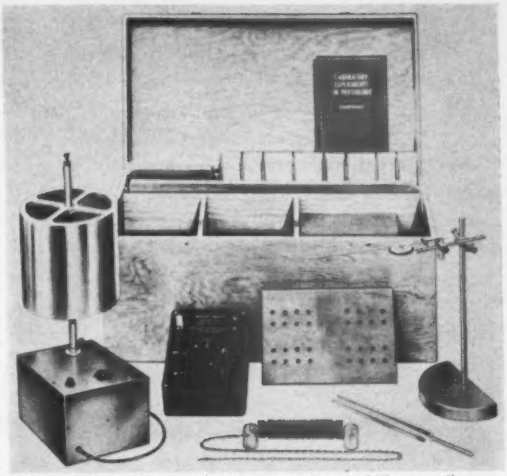

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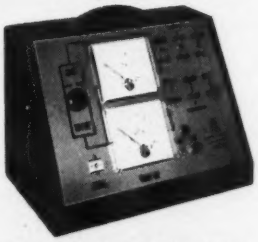

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ample seen on the television screen, or a visit to a world-renowned science research laboratory, is going to be a far more meaningful experience than anything read from a textbook or heard in class. Closed circuit TV is being extensively used on all levels of education throughout the country, let us hope the day is not far distant when every school will be able to include this among its most influential teaching materials.

The G. I. training program and the publicity given to it, as well as a desire on the part of school personnel to improve the learning activities of boys and girls, have led to an unprecedented wave of interest in the use of sound films and filmstrips in the educational curriculum. Children, like grown-ups, usually react favorably to an occasional change in daily procedure. The film or motion picture brings desirable variation by means of its movement, its everchanging scenes, and its appropriate sounds. This variety of learning often spells attention and interest where otherwise there might have been no desire for knowledge at all.

Since we are concerned here with the instructional materials particularly adaptable to science teaching, let us not ignore filmstrips and slides.

Projection Is Dynamic

Not all subjects need to be portrayed in motion to be properly understood. Projected still pictures such as the filmstrip and slides may be examined and analyzed at length, so that their application to the lesson at hand may be clearly understood. A class seeing the color filmstrip, *Primates—Monkeys and Their Relatives,* which shows the living habits, environment, and identifying characteristics of the animals, will be aroused to a far higher degree of curiosity and research than the class which merely reads about the animals from the textbook. Projection is dynamic, pupils have a right to expect something out of the ordinary, and this impact is common to both slides and filmstrips popular because they are easy to use and relatively inexpensive. Like all learning materials they should be used when they offer the most effective enrichment, challenge, or assistance to the learner.

Educational psychologists continue to estimate that from 50 to 60 per cent of all the experiences communicated between teacher and pupil are carried on through the realm of listening experiences and audio response. This means that if our listening experiences are going to be of a maximum efficiency we must explore the field for the best materials available. Recordings, let me point out, are a medium of two-way communication. You may stop a recording to discuss a passage, to answer a question, to clarify certain points. You can play it over and over again, and thus it is evident that the recording used in class may in many respects be more advantageous than the radio.

The Tape Recorder

Perhaps the latest recording device to appear in the classroom is the tape recorder, that highly flexible teaching tool which can be put to so many varied and unique uses. No other single piece of equipment has made such rapid progress. A decade ago it was spoken of with awe as an instrument to which the Armed Services had sole priority. Tape recording should be used when it enables the classroom teacher to do something better than she could do without the tape recorder. Perhaps nowhere more than in the field of science will this follow through. Recorded science lessons should interest any class. Sounds of the wind, animal sounds, traffic sounds, sounds of musical instruments, voices—these and many more you can think of, make delightful tape lessons and surely will develop good listening. At another time it may be of supreme impor-

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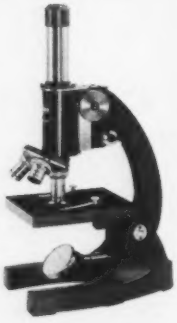

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UMI

tance to teacher and pupils to have a record of a radio or television scientific experiment; your tape recorder will do just that for you. These are but a few of the uses to which the tape recorder may be put in the science area of the curriculum, not that it is going to replace the teacher but that it is going to supplement and enrich "live" teaching. It is safe to predict that tape recordings will soon find their place in every school in the country, so that they will be to the pupils' ears what the chalkboards have been to their eyes. The economy in up-keep in this instance, more than justifies the initial expenditure of installation.

Adjusting to Today's World

Educators tell us the only evidence of learning is a change in human behavior. Today a new science of education is emerging, the science of audio-visual education. It is the means by which the experiences of the world, as they existed in the past or are apt to exist in the future, or will eventually be traced to some remote planet, can be brought into any classroom in any community. We cannot remain static, we must open up this great new world of living experience to the young learner if he is to function effectively in the complex world of tomorrow. If the child is to be equipped to take his place in the world of tomorrow, let us educators make sure that we have fulfilled our obligation to see that he competently adjusts to his world of today —a world of space vehicles, Echo balloons, and supersonic jets.

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Parents Inspect School Records? Yes

(*Continued from page 273*)

Result: Improved Understanding of Child

What are these test results? What is meant by "seeing the test scores?" Viewing a series of numbers on a profile sheet or in a cumulative record folder certainly must not be considered as the answer. Such a "viewing" could only result in more harm than good. What do these numbers represent? This question must, of necessity, be answered. If the test results are presented as percentiles, care must be taken to be certain that percentiles are not confused with percentages. If test scores are presented as stanines, perhaps some statistical teaching will be in order. Other methods of recording test results may also require clarification. The important fact is that these scores must be made meaningful to the parents. The meaning of "local norms" and "national norms" may have to be explained. An explanation of "I.Q." scores and their possible implications will definitely be necessary. All of this will consume time, valuable to both parent and teacher, but I feel that the increased understanding of the child and his potentialities and his limitations will more than repay all concerned for the extra effort expended to make this facet of educational and psychological measurement more meaningful. An understanding of the test scores by both parent and teacher can only result in an improved understanding of the child.

This era is commonly referred to as "the space age." To be very realistic, it is also, "the test age." Tests are administered to meet many demands. They are used in varied areas to aid in selection—jobs of all types, armed services, college admissions, and most recent of all, the Peace Corps. If tests provide much valuable information to all concerned in these areas, why must we feel that all of the test results must be classified as, "Top Secret"? Let's "de-classify" some of this information, and through intellectual means of communication, filter this information to the sources that are most entitled to it—the parents.

Fifth Grade Science Fair

(*Continued from page 267*)

learning, only the grade work; but under pressure of parents whose interest she appreciated, and some of whom were specialists in the very thing she was trying to teach, Sister said she would consider other demonstrations. These others, most of which involved electricity, were worth the effort required to find an additional space by opening up an adjoining playroom, separated from her classroom by sliding doors. The children's own movable desks were used as booths and the charts were placed as conveniently as possible above the booth or on the blackboard ledge. The *sine qua non* for admission as demonstrator was a thorough knowledge of experiment and principle involved.

Teacher and high school student visitors were so impressed by the fair and the apparent know-how of the demonstrators as to call for a repeat performance, for those unable to attend the first demonstration.

So the science fair, intimately related to what went before, was an organized part of the entire teaching process. It was the clincher, the climax (albeit a dramatic one) of the year's work in science. It gave promise of establishing that goal of every teacher: permanency in learning. It promised more too: it promises to be an annual affair.

Reading Needs of Christian Child

(*Continued from page 277*)

Our problem . . . is to embody eternal truth in time, in our own time and in our own day . . . We must help to make truth a living reality in those who are our students and who will become adult American citizens in all walks of life. Furthermore, as American citizens they will be called upon to do an extraordinary work in the world, the work of helping to build a society which will increasingly promote within itself a worthy image of man. This their education must help them to accomplish . . .

Now if the Christian work of the Catholic citizen has permanent objectives in any time and place, still in the United States we are confronted by very specific conditions and opportunities. These conditions help to sharpen our understanding of our present responsibilities as Catholic educators.

These words of Pegis, it seems to me, point up an aspect of Christian education, a need of the Catholic child which we must ponder with deep seriousness. Our sense of mission becomes urgent as we grow in awareness of our world, its problems, its needs. Television and radio help to keep us informed of news, but it is our periodicals and diocesan newspapers that afford us a reflective view of the world in which we live, the world we are dedicated to restore in Christ.

The Catholic Citizen

(*Continued from page 252*)

in itself and favorable to the common good. Therefore, the rules of justice being duly observed, the people are free to adopt that form of government which befits their temper, or best accords with their traditions and customs." The Republic of the United States is the perfect answer to the demand of the people who came of their own accord to live under its Constitution, a Constitution which grants the fullest recognition to human dignity and rights, the fullest measure of personal freedom that due respect for the rights of others and the welfare of the social organism may allow.

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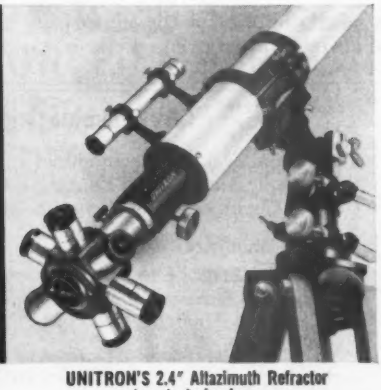

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Each unit comprises three elements: (1) a filmstrip, consisting of approximately 60 frames of original art work in Eastman color; (2) a dramatization, in ten minutes, synchronized to the filmstrip on a 12", standard-speed, R.C.A. unbreakable record; (3) a Lesson Plan, printed on the back of each record sleeve, describing objectives, procedure, ten points of doctrine, six basic questions (which are also placed at the end of the filmstrip, and keyed to appropriate pictures), eight supplementary questions, and finally, suggested pupil prayers and resolutions.

The stated purpose of each unit is twofold: to teach the lesson of the Baltimore Catechism to which it is keyed, and to make the lesson practical in the lives of the students.

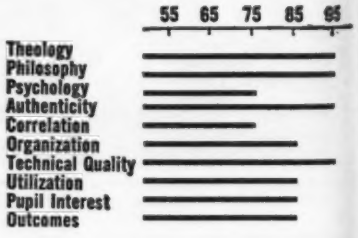
Costs of *The Commandments* is $150. Individual units are priced at $15. Various package plans are available. Material may be previewed for a ten-day period. For further information write to the distributor: Brian Press, 230 Broad St., Bloomfield, N.J.

Unit 29: 6th and 9th Commandments

Description. The sixth and ninth commandments are seen as God-given guides designed to assist in the preservation of chastity. Consideration is given to natural and supernatural means toward growth in purity.

Analysis. In the light of the difficulty of the subject matter and the limitations of treatment in the catechism itself it is not surprising that the St. John's Catechism unit on the sixth and ninth commandments is not entirely satisfactory. In its technical aspects it is better than good and in its presentation of St. Maria Goretti and Blessed Dominic Savio as models of purity it is effective. But in considering the principles involved it shares in the catechism's lack of clarity, at least for the elementary age group for which it seems to be primarily intended.

Elimination of the well known stories of Maria Goretti and Dominic Savio in favor of a more leisurely consideration of principle, might well have enhanced the usefulness of this filmstrip to the teacher of elementary school pupils. This is not to say that there should be any less attention to motivation. Indeed it can be said that the presentation is deficient on that score. It would benefit from a more personal approach, underscoring motives for chastity with appeal for the young.



It must be said, however, that this filmstrip does treat with some degree of adequacy what is admittedly a difficult topic. It is particularly useful for its brief but pointed review of the means available for growth in purity. In this connection, however, it is to be regretted that attention could not have been given to the value of regular and careful use of the Sacrament of Penance.

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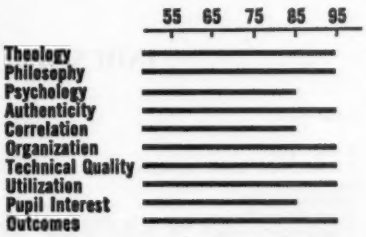
Appraisal. The teacher of the upper elementary and junior high school grades will find this unit to be a valuable aid in teaching the sixth and ninth commandments. However, he must not expect too much. The rating is B and the Cave Seal of Approval is granted.

NEW YORK CAVE COMMITTEE

Unit 30: 7th and 10th Commandments

Description. In sixty-eight color frames with sound the catechism lessons on the seventh and tenth commandments are presented and briefly reviewed.

Analysis. This unit of the St. John's Catechism measures up quite adequately to the generally high standards of the series. The art work is clear and appealing. Sound and music are adequate and the dramatic interludes are effective. A deficiency is the fact that so much of the presentation is discursive, indeed patently didactic. But accepting the general pattern of the series, namely an entire catechism lesson to each film strip, it would be unreasonable to expect a more relaxed and more interesting approach that would at the same time give adequate treatment to the material of this lesson.



The unit is particularly well organized, beginning with principle and moving on to practice, demonstrating through down-to-earth examples, particularly suitable for children, how the seventh and tenth commandments may be violated, first by a failure to make proper use of God-given talents and goods and then by injustices practiced toward others. The emphasis throughout is positive and the approach is ever practical, particularly in the consideration, brief though it is, of restitution. As the filmstrip moves toward a conclusion the emphasis on the positive grows ever more insistent and there is an admirable ascent to virtue, the virtues of gratitude and generosity. The conclusion is on that same level, in that same spirit, featuring the words of Our Divine Lord urging concern with His Kingdom rather than with the things of this world.

Appraisal. This filmstrip has much to offer the teacher of upper elementary and junior high school grades who is anxious to convey to pupils the breadth and depth of their obligation, under the seventh and tenth commandments, in the use of material things. It will be less useful in the instruction of the younger and the older. The rating is A — and the Cave Seal of Approval is granted.

NEW YORK CAVE COMMITTEE

Reader Reaction

(*Continued from page 226*)

mathematics, I, as a first grade teacher, see no reason why such ideas can not be introduced in the first grade. The article, "Sets in the Primary Grades" (Sept.

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(*Continued from preceding page*)

'61, p. 49) clearly defined to the teacher who is unaccustomed to having such terms in her daily arithmetic vocabulary, the method, procedure and purpose to be derived from such lessons. The explanations and illustrations were simple, yet so informative and adequate.

However, I do not feel that it would be feasible, because of the heterogeneous grouping in the ordinary primary grade of any Catholic school, to attempt the notion of sub-sets. I think that a primary group that has been brought together because of ability is a rarity. My opinion would be to strive for individual understanding of the term set by having the brighter children aid the slower to grasp the rationality of it. This practice will aid the former immeasurably and the latter will not be "at sea." Thus the addition of sub-sets would be forestalled to the intermediate grades, where there is greater possibility of the youngsters being grouped. The teacher of a grouped class is able to pursue the subject at a pace which her group will grasp.

I hope that this method of mathematics can be used simultaneously with current methods in use. The understanding and rationalization that goes on in a child's mind is a commendable outgrowth of the new approach but I still maintain that a certain amount of drill is essential and that automatic recall of combinations should be a basic habit with the primary child.

SISTER M. CHARLES VERONICA, C.S.J.
St. Augustine's School, Brooklyn 17, N. Y.

Correction

An incorrect address was given for this firm in our October 1961 issue. The correct address is given below:

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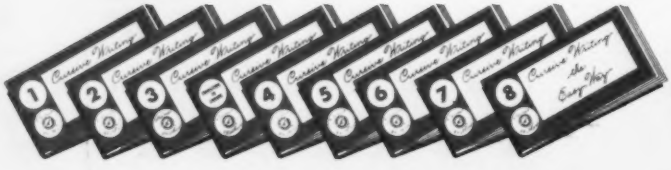

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